

Specifications guide

Americas refined oil products

Latest update: May 2020

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DEFINITIONS OF THE TRADING LOCATIONS FOR WHICH PLATTS PUBLISHES DAILY INDEXES OR ASSESSMENTS

All the assessments listed here employ S&P Global Platts Assessments Methodology, as published at https://www.spglobal.com/platts/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.

Pipeline assessments: Platts US refined product pipeline assessments reflect product specifications of the relevant pipeline, unless otherwise specified. These are updated periodically by the pipeline companies and Platts assessments reflect the latest specifications.

Renewable identification numbers: Platts US domestic refined product assessments reflect the tradable value of products in the spot market, which, for road transport fuels includes the cost of meeting renewable volume obligations (RVOs) mandated by the Environmental Protection Agency. However, this cost, represented by the spot market value of RINs, is typically deducted from the value of export and import cargo assessments.

Nomination procedures: For most FOB assessments, it is the seller, as terminal party, who nominates the terminal and loading date. For most delivered assessments, it is the buyer, as terminal party, who nominates the terminal and delivery date.

Platts understands that there are various public dock clauses used in the spot market. In the event that terminal dates do not meet the reported transaction laycan, the terminal party could apply these clauses to extend demurrage liabilities for the vessel party. For example, if a terminal date obtained was two days after the transaction laycan, and the vessel arrives within the transaction laycan, the vessel party could be liable for those two days of demurrage under some public dock clauses.

Terminal parties for trades reported to Platts should ensure that they seek terminal dates that meet the reported transaction laycan. If the terminal party fails to obtain terminal dates that meet the laycan, then the terminal party should bear the cost of the extended demurrage.

Explanation of EFPs: In the Americas, many physical refined products trade at a differential to an underlying oil futures contract: light sweet crude oil, New York Harbor RBOB gasoline barges or New York Harbor ULSD barges. The primary exchange used to date is the New York Mercantile Exchange (NYMEX). For assessments to be robust and fully reflective of spot values, the values of both the EFP as well as the underlying futures value must be established at the same time.

When analyzing bids, offers and expressions of interest to trade that are submitted as an EFP versus a futures contract (e.g. July RBOB +\$0.01/barrel), Platts will use the official NYMEX settlement price at 2:30 pm ET for the futures contract in question to calculate the flat price for the assessment.

Explanation of the Strip: Strips are assessed in certain US refined product markets, particularly fuel oil, to aid in the assessment of market value. This explanation for the Strip describes how it is determined, and its application in Platts assessment process.

The Platts assessment process determines the value of physical

commodities for forward delivery or loading at a wide variety of locations across the Americas. Many of these commodities trade on an outright price basis – where the full price is known at time of trade -- or on a Platts-related, floating price basis – where much of the value is determined in reference to reference prices that will be published in the future. Additionally, some products are regularly traded as Exchange of Futures for Physical contracts, where the difference in value between a physical market and a reference futures contract is an important component in establishing the value of the physical market being assessed.

When the value of commodities is clearly defined through outright price market activity, such activity can help establish value with a high degree of certainty. When there is a lack of outright price activity in a market, or when the most clearly defined market activity is being demonstrated on a floating price basis, it becomes critical to track the value the market assigns to future, yet-to-be published Platts assessments.

In derivatives markets, a Strip is any contiguous date series in the future. A “Summer Strip” might be April, May, June, July, August and September. An “Annual Strip” would typically be 12 consecutive months. A Platts Strip is a sequence of days that represent the future loading dates reflected in Platts oil product assessments.

The Strip published by Platts for certain oil markets represents the value the market assigns to future Platts assessments, through trading in Platts-related, monthly derivatives. This value is determined by analyzing the derivatives market.

As financially settled contracts, derivatives derive their value from published benchmark assessments. They do not entail physical delivery of oil. For example, if a 50,000 barrel June swap derivative was bought at \$88.00/barrel, the seller would pay the buyer \$1/barrel (or \$50,000 in this example) if the underlying

benchmark averaged \$89.00/barrel over the month of June; the buyer would pay the seller \$1/barrel (or \$50,000 in this example) if the reference price averaged \$87.00/barrel. Oil derivatives, commonly used to hedge exposure to benchmark prices in the future, are generally traded for full months, and also the balance of the prevailing month.

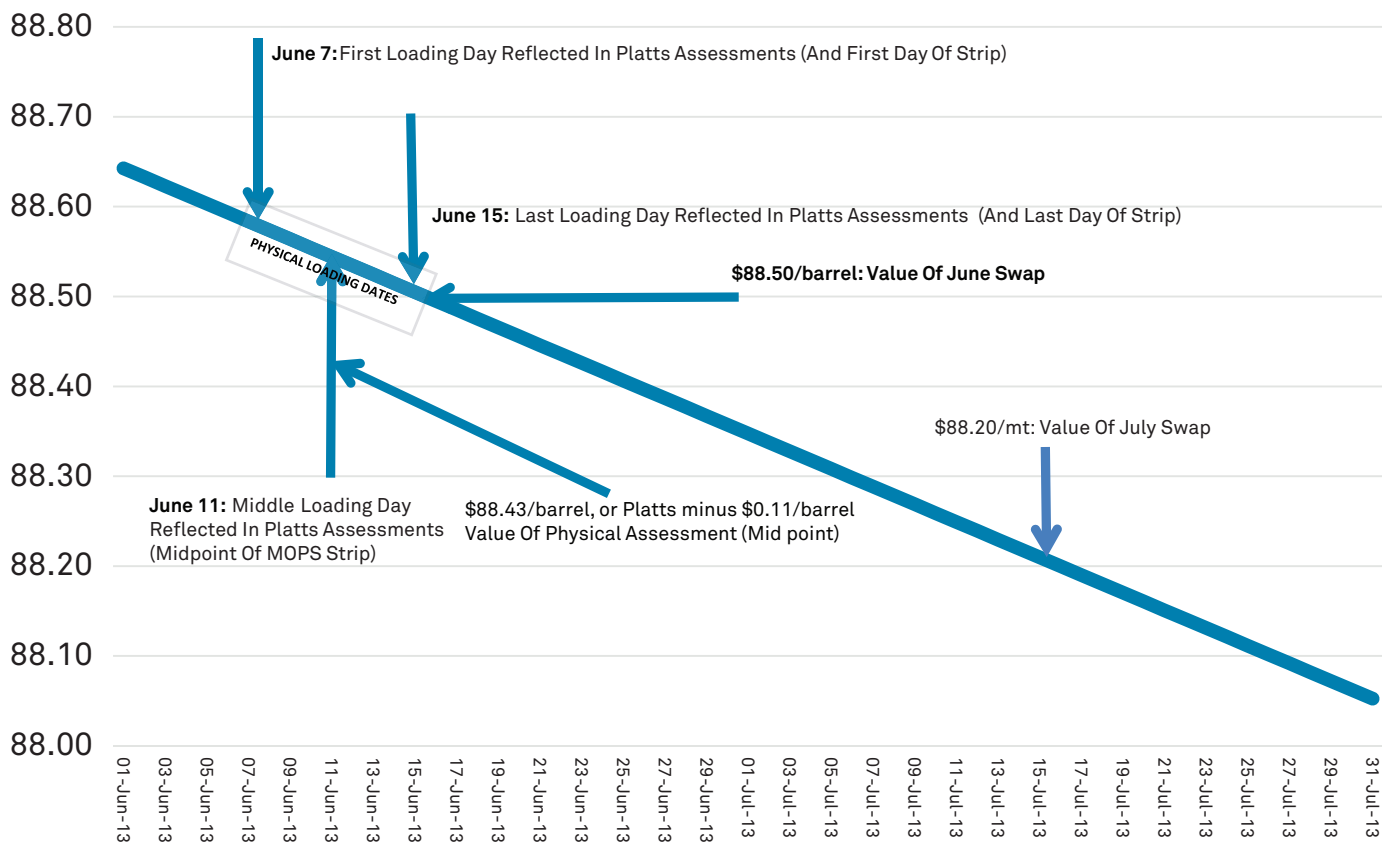
The final, financial settlement of a swap derivative can only be completed when all the value that comprise the average are known (i.e., after the last publishing day in June, for a swap derivative that references the average of published prices in June).

Just like swap derivatives, Platts-related physical cargoes that trade on a floating price basis ultimately derive a final value over a pre-determined period of time in the future – usually around loading dates, with a premium or discount applied to reflect market structure, and possible differences in specification, location and trading terms.

The Platts Strip is used as a component in measuring the value of the physical market, when floating price trading is common. The strip represents an underlying, market-assigned future value for the Platts assessments, and it is an important component in fully analyzing the price determination of physical cargoes when they are regularly traded on a floating price basis. While the value that Platts will publish in its assessments can never be known at the time of trading a cargo that will be delivered and priced in the future, a hedgable, proxy value for the relevant Platts assessments of the future can be extrapolated from derivative markets, so long as the derivative being analyzed, and the floating price physical contract being valued, use the same Platts reference price for final settlement.

Platts therefore publishes a Platts Strip in markets where physical cargoes trade at both fixed-price levels, and as premiums or discounts to the Platts assessment itself. It is published when there is a vibrant derivatives market to serve as the basis for analysis.

ILLUSTRATION OF THE STRIP



By standing as a hedgable proxy value for the Platts-related element of a floating price cargo, the Strip is essential to defining the flat-price equivalent value of a cargo that is traded as a premium or discount to the Platts assessment.

As an example, the Platts USGC HSFO assessment is based on cargoes loading 7-15 days from the date of the assessment.

Hence, if today is May 31, the assessments will reflect the value of cargoes loading during June 7-15.

The Platts Strip is the value of the derivatives market on those assessment days; in this particular example, the mid-point of the assessed period is June 11.

This is a specific sample calculation for how the MOPS strip would be calculated:

USGC HSFO on May 31, 2017 (\$/barrel)

June (derivative): \$48.50

July (derivative): \$48.20

June/July spread: +30 cents (backwardation)

Physical USGC HSFO (loading on June 7-15): \$48.43

Since there are 30.5 days between mid-June (30 days) and mid-July (31 days) – we calculate the daily backwardation value to be +0.9836 cents (from +0.30/30.5). Since there are four days between mid-June (June 15) and the mid-point date for physical assessment (June 11), the calculated Strip value is:

$$= \$48.50 + (0.009836 \times 4)$$

$$= \$48.54 \text{ (rounded to two decimal places)}$$

In terms of the application of Strip in the Platts assessment process, the Strip provides the third leg when triangulating the physical value of the market using the formula "physical value = Platts plus premium (or discount)." The Strip defines the value of

"Platts" in this equation. Again, this value is what the market has determined the future, yet to be published Platts assessments are able to be hedged at in the derivatives marketplace.

In an example, the difference between the physical value arrived at by the close of the assessment process and the Strip yields either a positive value or a negative value. This is the premium or the discount at which the physical market is trading versus future Platts assessments. In this case:

Physical premium (or discount) = Physical assessment - MOPS strip

$$\text{Physical premium (or discount)} = \$48.43 - \$48.54$$

$$\text{Physical premium (or discount)} = \text{minus } \$0.11$$

In a second example, the reverse process also generates a value. If Platts assessed the physical market premium as being MOPS minus \$0.11, the following equation could be applied:

Physical assessment = MOPS plus premium (or discount)

$$\text{Physical assessment} = \$48.54 - \$0.11$$

$$\text{Physical assessment} = \$48.43$$

LPGS/NGLS

Assessment	Code	Mavg	Contract basis	Location	Delivery period	Min size	Max size	Typical size	Currency	UOM	Conv
Purity Ethane Mt Belvieu non-LST Mo01	PMUDB05	PMUDG03	FOB	Mont Belvieu, TX	Min. 3 days, any barrel	25,000	-	-	US Cents	Gallon	7.42
Purity Ethane Mt Belvieu non-LST Mo02	AAWUC00	AAWUC03	FOB	Mont Belvieu, TX	Min. 3 days, any barrel	25,000	-	-	US Cents	Gallon	7.42
E/P Mix Conway spot	PMAA000	PMAA003	FOB	Conway, KS	Min. 3 days, any barrel	5,000	-	-	US Cents	Gallon	-
E/P Mix Ethane Mt Belvieu non-LST pipe Mo01	PMUDA05	PMUDA03	FOB	Mont Belvieu, TX	Min. 3 days, any barrel	25,000	-	-	US Cents	Gallon	-
Propane Conway spot	PMAAT00	PMAAT03	FOB	Conway, KS	Min. 3 days, any barrel	5,000	-	-	US Cents	Gallon	5.21
Propane Mt Belvieu LST pipe Mo01	PMABQ00	PMABQ03	FOB	Mont Belvieu, TX	Min. 3 days, any barrel	25,000	-	-	US Cents	Gallon	5.21
Propane Mt Belvieu LST pipe Mo02	AAWUE00	AAWUE03	FOB	Mont Belvieu, TX	Min. 3 days, any barrel	25,000	-	-	US Cents	Gallon	5.21
Propane Mt Belvieu non-LST pipe Mo01 (cts/gal)	PMAAY00	PMAAY03	FOB	Mont Belvieu, TX	Min. 3 days, any barrel	25,000	-	-	US Cents	Gallon	5.21
Propane Mt Belvieu non-LST pipe Mo02 (cts/gal)	AAWUD00	AAWUD03	FOB	Mont Belvieu, TX	Min. 3 days, any barrel	25,000	-	-	US Cents	Gallon	5.21
Propane Mt Belvieu non-LST pipe Mo01 (\$/mt)	AAXDD00	AAXDD03	FOB	Mont Belvieu, TX	Min. 3 days, any barrel	25,000	-	-	US\$	MT	5.21
Propane Hattiesburg spot	AALBC00	AALBC03	FOB	Hattiesburg, MS	Min. 3 days, any barrel	5,000	-	-	US Cents	Gallon	5.21
Propane FOB USGC (\$/mt)	AAXIM00	AAXIM03	FOB	USGC	30-45 days	44,000	44,000	-	US\$	MT	5.21
Propane FOB USGC vs Propane Mt Belvieu (\$/mt)	AAXIO00	AAXIO03	FOB	USGC	30-45 days	44,000	44,000	-	US\$	MT	5.21
Propane FOB USGC (cts/gal)	AAXIN00	AAXIN03	FOB	USGC	30-45 days	44,000	44,000	-	US Cents	Gallon	5.21
Propane FOB USGC vs Propane Mt Belvieu (cts/gal)	AAXIP00	AAXIP03	FOB	USGC	30-45 days	44,000	44,000	-	US Cents	Gallon	5.21
VLGC Freight Houston-Japan (\$/mt)	AAXIS00	AAXIS03	FOB	Houston	15-45 days	44,000	44,000	-	US\$	MT	NA
VLGC Freight Houston-Japan (cts/gal)	AAXIT00	AAXIT03	FOB	Houston	15-45 days	44,000	44,000	-	US Cents	Gallon	NA
VLGC Freight Houston-NWE (\$/mt)	AAXIQ00	AAXIQ03	FOB	Houston	15-45 days	44,000	44,000	-	US\$	MT	NA
VLGC Freight Houston-NWE (cts/gal)	AAXIR00	AAXIR03	FOB	Houston	15-45 days	44,000	44,000	-	US Cents	Gallon	NA
Butane Conway spot	PMAAD00	PMAAD03	FOB	Conway, KS	Min. 3 days, any barrel	5,000	-	-	US Cents	Gallon	4.53
Butane Mt Belvieu LST pipe Mo01	PMABR00	PMABR03	FOB	Mont Belvieu, TX	Min. 3 days, any barrel	25,000	-	-	US Cents	Gallon	4.53
Butane Mt Belvieu non-LST pipe Mo01 (cts/gal)	PMAAI00	PMAAI03	FOB	Mont Belvieu, TX	Min. 3 days, any barrel	25,000	-	-	US Cents	Gallon	4.53
Butane Mt Belvieu non-LST pipe Mo02 (cts/gal)	AAWUF00	AAWUF03	FOB	Mont Belvieu, TX	Min. 3 days, any barrel	25,000	-	-	US Cents	Gallon	4.53
Butane Mt Belvieu non-LST pipe Mo01 (\$/mt)	AAXDC00	AAXDC03	FOB	Mont Belvieu, TX	Min. 3 days, any barrel	25,000	-	-	US\$	MT	4.53
Isobutane Conway spot	PMAAA00	PMAAA03	FOB	Conway, KS	Min. 3 days, any barrel	5,000	-	-	US Cents	Gallon	4.7
Isobutane Mt Belvieu non-LST pipe	PMAAB00	PMAAB03	FOB	Mont Belvieu, TX	Min. 3 days, any barrel	10,000	-	-	US Cents	Gallon	4.7
Natural Gasoline Mt Belvieu Non-Targa pipe Mo01	PMABY05	PMABZ03	FOB	Mont Belvieu, TX	Min. 3 days, any barrel	25,000	-	-	US Cents	Gallon	3.97
Natural Gasoline Mt Belvieu Non-Targa pipe Mo02	AAWUG00	AAWUG03	FOB	Mont Belvieu, TX	Min. 3 days, any barrel	25,000	-	-	US Cents	Gallon	3.97
Natural Gasoline Mt Belvieu Targa pipe	PMABW05	PMABX03	FOB	Mont Belvieu, TX	Min. 3 days, any barrel	25,000	-	-	US Cents	Gallon	3.97
Natural Gasoline Mt Belvieu LST pipe	AAIVF00	AAIVG00	FOB	Mont Belvieu, TX	Min. 3 days, any barrel	25,000	-	-	US Cents	Gallon	3.97
Natural Gasoline Conway spot	PMAAQ00	PMAAQ03	FOB	Conway, KS	Min. 3 days, any barrel	5,000	-	-	US Cents	Gallon	3.97
Peruvian natural gasoline	AAXWD00	AAXWD03	FOB	Pisco	7-21 days forward	-	-	300000	US\$	Barrel	-
Propane CFR Suape (\$/mt)	BLSUA00	BLSUA03	CFR	Suape	45-60 days forward	44,000	44000	-	US\$	MT	-
Propane CFR Suape (Real/kg)	BLSAA00	BLSAA03	CFR	Suape	45-60 days forward	44,000	44000	-	Real	Kilogram	-
Propane CFR Santos (\$/mt)	BLSUB00	BLSUB03	CFR	Santos	45-60 days forward	44,000	44000	-	US\$	MT	-
Propane CFR Santos (Real/kg)	BLSAB00	BLSAB03	CFR	Santos	45-60 days forward	44,000	44000	-	Real	Kilogram	-
LPG IPP Suape (\$/mt)	BLSUC00	BLSUC03	-	Suape	-	-	-	-	US\$	MT	-
LPG IPP Suape (Real/kg)	BLSUD00	BLSUD03	-	Suape	-	-	-	-	Real	Kilogram	-
LPG IPP Santos (\$/mt)	BLSAC00	BLSAC03	-	Santos	-	-	-	-	US\$	MT	-
LPG IPP Santos (Real/kg)	BLSAD00	BLSAD03	-	Santos	-	-	-	-	Real	Kilogram	-

LPG/NGLs

Platts assessments for liquefied petroleum gas (LPG) and other natural gas liquids (NGLs) reflect trading in barrels for any days in the specified delivery month – also known as “any barrels” — through the end of the month, except for natural gasoline, which rolls three calendar days from the end of the month. Very prompt barrels are not reflected in Platts assessments. Platts assesses the value of the current month, before rolling its assessment forward by one month for all NGLs, except natural gasoline. Second-month assessments reflect one delivery month forward from the prompt delivery month.

Platts US LPG/NGL assessments are primarily published in US cents per gallon, with US dollars per barrel and US dollars per metric ton equivalents provided using conversion factors, where needed, as detailed in the table showing codes and conversion factors.

Platts publishes assessments on an FOB Mont Belvieu, Texas, basis, and FOB Conway, Kansas, basis for all gas liquids. Platts also assesses propane at Hattiesburg, Mississippi. The volume reflected in these assessments is a minimum of 5,000 barrels for all Conway and Hattiesburg deals; a minimum of 10,000 barrels for isobutane at Mont Belvieu; and a minimum of 25,000 barrels for all other NGL products.

Propane, butane and isobutane are assessed at Mont Belvieu on a non-LST basis and propane and butane on an LST basis. LST material is fractionated and stored in caverns at the former Texas Eastern Transmission Facility, previously owned by Louis Dreyfus Holdings and now owned by Lone Star NGL – a subsidiary of Energy Transfer Partners.

Natural gasoline is assessed on an LST, Targa and non-Targa basis at Mont Belvieu. The Targa facility, formerly owned by Warren Petroleum, is a major storage and fractionation facility in the Mont Belvieu area.

Ethane (C2): Platts publishes an assessment for non-LST purity ethane, as well as assessments for non-LST and Conway

ethane/propane mix. Ethane assessments reflect material with a specific gravity of 0.3546 and boiling point of -89 C. Purity ethane is 95% pure or better. Ethane/propane mix is comprised of 80% ethane and 20% propane.

Propane (C3): Platts publishes assessments for LST, non-LST, Conway and Hattiesburg propane. The assessments reflect a specific gravity of 0.5077 and boiling point of -43 C. Product specifications are the same for Mont Belvieu and Conway assessments.

Propane FOB USGC: Platts assesses propane cargoes loading at major US Gulf Coast export terminals on an FOB basis. The assessment reflects loadings out of the Enterprise and Targa terminals on the Houston ship channel. From April 2, 2018, the assessment has also started reflecting loadings from two newer LPG export terminals in Texas – Phillips 66’s terminal in Freeport and Energy Transfer Partners’ terminal in Nederland. The assessment reflects the value of 44,000 mt cargoes on very large gas carriers (VLGCs) loading 30-45 days forward from the date of publication. Smaller trade sizes in refrigerated propane may be considered in the assessment, but normalized for size. The quality basis for this assessment is “low-e” propane, or propane with an ethane content of 2% maximum. “HD-5,” or propane with an ethane content of 5% maximum, may be normalized back to the quality specification basis. The assessment is published in both US dollars per metric ton and US cents per gallon, to allow for efficient comparison between US pipeline and export markets.

VLGC Freight Houston-Japan: This assessment reflects the most competitive value of chartering a VLGC in the spot market to load propane from the US Gulf Coast for export to Japan, loading 15 to 45 days forward from the date of assessment. This has typically been via the Panama Canal, following the opening of the Neopanamax locks on June 26, 2016. The assessment is published in both US dollars per metric ton and US cents per gallon.

VLGC Freight Houston-NWE: This assessment reflects the value

of chartering a VLGC in the spot market to load propane for export to Northwest Europe, loading 15 to 45 days forward from the date of assessment. The assessment is published in both US dollars per metric ton and cents per gallon.

Butane (C4): Platts publishes assessments for LST, non-LST and Conway normal butane. Specific gravity of 0.5844; boiling point of -1 C. Product specifications are the same for Mont Belvieu and Conway assessments.

Isobutane (IC4): Platts publishes assessments for non-LST and Conway isobutane. Specific gravity of 0.5631; boiling point of -12 C. Product specifications are the same for Mont Belvieu and Conway assessments.

Natural gasoline (C5): Platts publishes assessments for LST, Targa, non-Targa and Conway. Specific gravity of 81 API; RVP of 12-14 psi; boiling point of 90 F; sulfur of maximum 0.1%; octane of maximum 73 (R+M)/2.

Latin America

Peruvian natural gasoline: Platts assesses natural gasoline on an FOB Pisco basis, loading between seven and 21 days forward in typical parcel sizes of 300,000 barrels.

Delivered Brazil propane: Platts assesses propane on a CFR basis to Suape and Santos in 44,000 mt cargoes, for delivery 45-60 days forward from the day of assessment, with multiport discharge optionality in line with typical market practice. The assessments are published in \$/mt and Brazilian Real/kilogram.

Brazil LPG IPP: Platts also publishes import parity prices for LPG, comprised of 70% propane and 30% butane, at Suape and Santos. The price represents the cost of LPG imported on the day of publication at each specified port. It includes the product value, freight, demurrage, insurance, losses, marine taxes, multi-port discharge optionality and quality differences, where applicable. The assessments are published in \$/mt and Brazilian Real/kilogram.

GASOLINE

Assessment	Code	Mavg	Contract basis	Location	Delivery period	Min size	Max size	Currency	UOM
US Gulf Coast									
Gasoline CBOB 87 USGC Houston prompt pipeline	AARQU00	AARQU03	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Gasoline CBOB 87 USGC Houston prompt pipeline vs NYMEX RBOB	AANYX77	AANYK03	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Gasoline CBOB 87 USGC pipeline Cycle 02	AARQW00	AARQW03	FOB	Houston	Forward Cycle	25,000	-	US Cents	Gallon
Gasoline CBOB 87 USGC pipeline Cycle 03	AARQX00	AARQX03	FOB	Houston	Forward Cycle	25,000	-	US Cents	Gallon
Gasoline CBOB 87 USGC pipeline Cycle 04	AARQY00	AARQY03	FOB	Houston	Forward Cycle	25,000	-	US Cents	Gallon
Gasoline CBOB 87 USGC pipeline Cycle 05	AARQZ00	AARQZ03	FOB	Houston	Forward Cycle	25,000	-	US Cents	Gallon
Gasoline CBOB 87 USGC pipeline Cycle 06	AARQA00	AARQA03	FOB	Houston	Forward Cycle	25,000	-	US Cents	Gallon
Gasoline CBOB 87 USGC pipeline supplemental	AASOB00	AASOB03	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Gasoline CBOB 87 USGC waterborne	AAWES00	AAWES03	FOB	Houston	10-18 days	50,000	125,000	US Cents	Gallon
Gasoline Premium CBOB 93 USGC Houston prompt pipeline	AARQV00	AARQV03	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Gasoline Premium CBOB 93 USGC Houston pipeline supplemental	AASOC00	AASOC03	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Gasoline RBOB 83.7 USGC Houston prompt pipeline	AAMFB00	AAMFC00	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Gasoline RBOB 83.7 USGC Houston prompt pipeline vs NYMEX RBOB	AANYX79	AANYY03	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Gasoline RBOB 91.4 USGC Houston prompt pipeline	AAMNG00	AAMNH00	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Gasoline Unl 87 USGC prompt pipeline	PGACT00	PGACT03	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Gasoline Unl 87 USGC prompt pipeline vs NYMEX RBOB	AANY105	AANYL03	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Gasoline Unl 87 USGC pipeline Cycle 01	AAELC00	AAFOM00	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Gasoline Unl 87 USGC pipeline Cycle 02	AAELD00	AAFON00	FOB	Houston	Forward Cycle	25,000	-	US Cents	Gallon
Gasoline Unl 87 USGC pipeline Cycle 03	AAELE00	AAFO000	FOB	Houston	Forward Cycle	25,000	-	US Cents	Gallon
Gasoline Unl 87 USGC pipeline Cycle 04	AAELF00	AAFOP00	FOB	Houston	Forward Cycle	25,000	-	US Cents	Gallon
Gasoline Unl 87 USGC pipeline Cycle 05	AAELG00	AAFOQ00	FOB	Houston	Forward Cycle	25,000	-	US Cents	Gallon
Gasoline Unl 87 USGC pipeline Cycle 06	AAELH00	AAFOR00	FOB	Houston	Forward Cycle	25,000	-	US Cents	Gallon
Gasoline Unl 87 USGC waterborne	PGACU00	PGACU03	FOB	Houston	10-18 days	50,000	125,000	US Cents	Gallon
Gasoline Unl 87 USGC waterborne supplemental	PGAAC00	AAGCA03	FOB	Houston	10-18 days	50,000	125,000	US Cents	Gallon
Gasoline Unl 89 USGC prompt pipeline	PGAAY00	PGAAY03	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Gasoline Unl 89 USGC waterborne	PGAAZ00	PGAAZ03	FOB	Houston	10-18 days	50,000	125,000	US Cents	Gallon
Gasoline Unl 93 USGC prompt pipeline	PGAJB00	PGAJB03	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Gasoline Unl 93 USGC waterborne	PGAIX00	PGAIX03	FOB	Houston	10-18 days	50,000	125,000	US Cents	Gallon
Colonial line space Line 1 (gasoline)	AAXTA00	AAXTA03	FOB/CIF	Colonial Pipeline	Prompt Cycle	25,000	-	US Cents	Gallon
Colonial line space Line 1 and Line 3 (gasoline)	AAXTC00	AAXTC03	FOB/CIF	Colonial Pipeline	Prompt Cycle	25,000	-	US Cents	Gallon
Colonial line space Line 3 (gasoline)	AAXTB00	AAXTB03	FOB/CIF	Colonial Pipeline	Prompt Cycle	25,000	-	US Cents	Gallon
Intraday Gasoline CBOB USGC pipe	AAWZU00	-	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Intraday Gasoline CBOB USGC pipe vs NYMEX RBOB	AAWZU01	-	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Intraday Gasoline RBOB USGC pipe	AAWZX00	-	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Intraday Gasoline RBOB USGC pipe vs NYMEX RBOB	AAWZX01	-	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
USGC CBOB RVP Adjustment cts/gal	AGLOA00	AGLOA03	-	Houston	Prompt Cycle	-	-	US Cents	Gallon
Premium CBOB RVP Adjustment cts/gal	AGHOA00	AGHOA03	-	Houston	Prompt Cycle	-	-	US Cents	Gallon

GASOLINE

Assessment	Code	Mavg	Contract basis	Location	Delivery period	Min size	Max size	Currency	UOM
US Atlantic Coast									
Gasoline CBOB Buckeye Pipeline	AAPSY00	AAPSY03	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Gasoline CBOB Buckeye Pipeline vs NYMEX RBOB	AANYX33	AANYF03	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Gasoline CBOB Buckeye Pipeline supplemental	AAQIY00	-	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Gasoline CBOB Colonial Pipeline Linden	ABXPW00	ABRQW03	FOB	NYH	First Full Cycle	25,000	75,000	US Cents	Gallon
Gasoline CBOB Colonial Pipeline Linden vs NYMEX RBOB	AANYX41	AANYI03	FOB	NYH	First Full Cycle	25,000	75,000	US Cents	Gallon
Gasoline CBOB Laurel pipeline	AAUAS00	AAUAS03	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Gasoline CBOB Laurel pipeline supplemental	AAVOJ00	-	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Gasoline CBOB NY Barge	AAWBL00	AAWBL03	FOB	NYH	3-7 days	25,000	100,000	US Cents	Gallon
Gasoline CBOB NY Barge vs NYMEX RBOB	AANYX14	AANYD03	FOB	NYH	3-7 days	25,000	100,000	US Cents	Gallon
Gasoline CBOB NY Barge supplemental	AAXFS00	-	FOB	NYH	3-7 days	25,000	100,000	US Cents	Gallon
Gasoline CBOB NY Cargo	AAWBK00	AAWBK03	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline CBOB NY Cargo supplemental	AAXFU00	-	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline CBOB NY Cargo Duty+RINS	AASAK00	AASAK03	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline CBOB NY Cargo Duty+RINS supplemental	AASNHDR	-	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline CBOB NY Cargo Ex-Duty	AASAD00	AASAD03	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline CBOB NY Cargo Ex-Duty supplemental	AASNH00	-	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline CBOB NY Ratables	AAVSR00	AAVSR03	FOB	NYH	One month forward	25,000	75,000	US Cents	Gallon
Gasoline CBOB PA Buckeye Pipeline	AAVYA00	AAVYA03	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Gasoline Prem CBOB Buckeye Pipeline	AAPSZ00	AAPSZ03	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Gasoline Prem CBOB Buckeye Pipeline supplemental	AAQIZ00	-	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Gasoline Prem CBOB PA Buckeye Pipeline	AAVYB00	AAVYB03	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Gasoline Prem CBOB Laurel pipeline	AAUAT00	AAUAT03	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Gasoline Prem CBOB Laurel pipeline supplemental	AAVOK00	-	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Gasoline Prem CBOB NY Barge	AAWLC00	AAWLC03	FOB	NYH	3-7 days	25,000	75,000	US Cents	Gallon
Gasoline Prem CBOB NY Barge supplemental	AAXFT00	-	FOB	NYH	3-7 days	25,000	75,000	US Cents	Gallon
Gasoline Prem CBOB NY Cargo	AAWLD00	AAWLD03	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Prem CBOB NY Cargo Duty+RINS	AASAL00	AASAL03	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Prem CBOB NY Cargo Duty+RINS supplemental	AASNIDR	-	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Prem CBOB NY Cargo Ex-Duty	AASAE00	AASAE03	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Prem CBOB NY Cargo Ex-Duty supplemental	AASNI00	-	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Prem CBOB NY Cargo supplemental	AAXFV00	-	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline RBOB Boston Cargo	AAVPV00	AAVPV03	CIF	Boston	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline RBOB Boston Cargo supplemental	AAXGA00	-	CIF	Boston	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline RBOB Buckeye Pipeline	AAMHB00	AAMHD00	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Gasoline RBOB Buckeye Pipeline supplemental	AANWK00	-	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Gasoline RBOB Buckeye Pipeline vs NYMEX RBOB	AANYX35	AANYG03	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Gasoline RBOB Colonial Pipeline Linden	ADXPW00	ADRQW03	FOB	NYH	First Full Cycle	25,000	75,000	US Cents	Gallon

GASOLINE

Assessment	Code	Mavg	Contract basis	Location	Delivery period	Min size	Max size	Currency	UOM
Gasoline RBOB Colonial Pipeline Linden vs NYMEX RBOB	AANYX42	AANYJ03	FOB	NYH	First Full Cycle	25,000	75,000	US Cents	Gallon
Gasoline RBOB Laurel pipeline	AASSM00	AASSM03	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Gasoline RBOB Laurel pipeline supplemental	AASSQ00	-	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Gasoline RBOB NY Barge	AAMGV00	AAMGX00	FOB	NYH	3-7 days	25,000	100,000	US Cents	Gallon
Gasoline RBOB NY Barge supplemental	AANWI00	-	FOB	NYH	3-7 days	25,000	100,000	US Cents	Gallon
Gasoline RBOB NY Barge vs NYMEX RBOB	AANYX15	AANYE03	FOB	NYH	3-7 days	25,000	100,000	US Cents	Gallon
Gasoline RBOB NY Cargo	AAVKS00	AAVKS03	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline RBOB NY Cargo Duty+RINS	AASAM00	AASAM03	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline RBOB NY Cargo Duty+RINS supplemental	AASNJDR	-	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline RBOB NY Cargo Ex-Duty	AASAF00	AASAF03	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline RBOB NY Cargo Ex-Duty supplemental	AASNJ00	-	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline RBOB NY Cargo supplemental	AAXFY00	-	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline RBOB NY Ratables	AAVSS00	AAVSS03	FOB	NYH	One month forward	25,000	75,000	US Cents	Gallon
Gasoline PBOB Laurel pipeline	AASSN00	AASSN03	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Gasoline PBOB Laurel pipeline supplemental	AASSR00	-	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Gasoline Prem RBOB Buckeye Pipeline	AAMHZ00	AAMHE00	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Gasoline Prem RBOB Buckeye Pipeline supplemental	AANWL00	-	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Gasoline Prem RBOB NY Barge	AAMGY00	AAMHA00	FOB	NYH	3-7 days	25,000	75,000	US Cents	Gallon
Gasoline Prem RBOB NY Barge supplemental	AANWJ00	-	FOB	NYH	3-7 days	25,000	75,000	US Cents	Gallon
Gasoline Prem RBOB NY Cargo	AAVKT00	AAVKT03	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Prem RBOB NY Cargo supplemental	AAXFZ00	-	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Prem RBOB NY Cargo Duty+RINS	AASAN00	AASAN03	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Prem RBOB NY Cargo Duty+RINS supplemental	AASNKDR	-	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Prem RBOB NY Cargo Ex-Duty	AASAG00	AASAG03	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Prem RBOB NY Cargo Ex-Duty supplemental	AASNK00	-	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Unl 87 Colonial Pipeline Linden	ACXPW00	ACRQW03	FOB	NYH	First Full Cycle	25,000	75,000	US Cents	Gallon
Gasoline Unl 87 Colonial Pipeline Linden vs NYMEX RBOB	AANYX40	AANYH03	FOB	NYH	First Full Cycle	25,000	75,000	US Cents	Gallon
Gasoline Unl 87 NY Barge	AAMIT00	AAMIU00	FOB	NYH	3-7 days	25,000	75,000	US Cents	Gallon
Gasoline Unl 87 NY Barge supplemental	AAOYI00	-	FOB	NYH	3-7 days	25,000	75,000	US Cents	Gallon
Gasoline Unl 87 NY Cargo	AAMHG00	AAMHH00	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Unl 87 NY Cargo supplemental	AAOYF00	-	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Unl 87 NY Cargo Duty+RINS	AASAH00	AASAH03	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Unl 87 NY Cargo Duty+RINS supplemental	AASNEDR	-	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Unl 87 NY Cargo Ex-Duty	AASAA00	AASAA03	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Unl 87 NY Cargo Ex-Duty supplemental	AASNE00	-	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Unl 89 NY Barge	AAMHJ00	AAMHK00	FOB	NYH	3-7 days	25,000	75,000	US Cents	Gallon
Gasoline Unl 89 NY Barge supplemental	AAOYJ00	-	FOB	NYH	3-7 days	25,000	75,000	US Cents	Gallon
Gasoline Unl 89 NY Cargo	AAMIW00	AAMIX00	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon

GASOLINE

Assessment	Code	Mavg	Contract basis	Location	Delivery period	Min size	Max size	Currency	UOM
Gasoline Unl 89 NY Cargo supplemental	AAOYG00	-	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Unl 89 NY Cargo Duty+RINS	AASAI00	AASAI03	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Unl 89 NY Cargo Duty+RINS supplemental	AASNFRD	-	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Unl 89 NY Cargo Ex-Duty	AASAB00	AASAB03	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Unl 89 NY Cargo Ex-Duty supplemental	AASNF00	-	FOB	NYH	3-7 days	25,000	75,000	US Cents	Gallon
Gasoline Unl 93 NY Barge	AAMHM00	AAMHN00	FOB	NYH	3-7 days	25,000	75,000	US Cents	Gallon
Gasoline Unl 93 NY Barge supplemental	AAOYK00	-	FOB	NYH	3-7 days	25,000	75,000	US Cents	Gallon
Gasoline Unl 93 NY Cargo	AAMIZ00	AAMJA00	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Unl 93 NY Cargo supplemental	AAOYH00	-	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Unl 93 NY Cargo Duty+RINS	AASAJ00	AASAJ03	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Unl 93 NY Cargo Duty+RINS supplemental	AASNGDR	-	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Unl 93 NY Cargo Ex-Duty	AASAC00	AASAC03	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Gasoline Unl 93 NY Cargo Ex-Duty supplemental	AASNG00	-	CIF	NYH	5-15 days forward	150,000	-	US Cents	Gallon
Intraday Gasoline CBOB NYH barge	AAWZT00	-	FOB	NYH	3-7 days	25,000	100,000	US Cents	Gallon
Intraday Gasoline CBOB NYH barge vs NYMEX RBOB	AAWZT01	-	FOB	NYH	3-7 days	25,000	100,000	US Cents	Gallon
Intraday Gasoline RBOB NYH barge	AAWZW00	-	FOB	NYH	3-7 days	25,000	100,000	US Cents	Gallon
Intraday Gasoline RBOB NYH barge vs NYMEX RBOB	AAWZW01	-	FOB	NYH	3-7 days	25,000	100,000	US Cents	Gallon
Midwest									
Gasoline CBOB Chicago pipeline	AAREL00	AAREL03	FOB	Chicago	Prompt Cycle	10,000	-	US Cents	Gallon
Gasoline CBOB Chicago pipeline vs NYMEX RBOB	AANY101	AANYA03	FOB	Chicago	Prompt Cycle	10,000	-	US Cents	Gallon
Gasoline CBOB Chicago BCX	ACBAA00	ACBAA03	In-tank	Chicago BCX	Prompt Cycle	10,000	-	US Cents	Gallon
Gasoline CBOB Chicago BCX vs NYMEX RBOB	ACBAB00	ACBAB03	In-tank	Chicago BCX	Prompt Cycle	10,000	-	US Cents	Gallon
Gasoline RBOB Chicago pipeline	PPARH00	PPARH03	FOB	Chicago	Prompt Cycle	10,000	-	US Cents	Gallon
Gasoline RBOB Chicago pipeline vs NYMEX RBOB	AANY102	AANYB03	FOB	Chicago	Prompt Cycle	10,000	-	US Cents	Gallon
Gasoline RBOB Chicago BCX	ACBAC00	ACBAC03	In-tank	Chicago BCX	Prompt Cycle	10,000	-	US Cents	Gallon
Gasoline RBOB Chicago BCX vs NYMEX RBOB	ACBAD00	ACBAD03	In-tank	Chicago BCX	Prompt Cycle	10,000	-	US Cents	Gallon
Gasoline PBOB Chicago Pipe	AAUEU00	AAUEU03	FOB	Chicago	Prompt Cycle	10,000	-	US Cents	Gallon
Gasoline Unl 87 Chicago pipeline	PGACR00	PGACR03	FOB	Chicago	Prompt Cycle	10,000	-	US Cents	Gallon
Gasoline Unl 89 Chicago pipeline	PGAAX00	PGAAX03	FOB	Chicago	Prompt Cycle	10,000	-	US Cents	Gallon
Gasoline Unleaded 91 Chicago pipeline	PPASQ00	PPASR03	FOB	Chicago	Prompt Cycle	10,000	-	US Cents	Gallon
Gasoline Unl Sub Octane Group 3 pipeline	AAXIX00	AAXIX03	FOB	Tulsa, OK	Next business day	10,000	-	US Cents	Gallon
Gasoline Unl Sub Octane Group 3 pipeline vs NYMEX RBOB	AANYX01	AANYC03	FOB	Tulsa, OK	Next business day	10,000	-	US Cents	Gallon
Gasoline Prem Unl 91 Group 3 pipeline	PGABD00	PGABD03	FOB	Tulsa, OK	Next business day	5,000	-	US Cents	Gallon
Intraday Gasoline CBOB Chicago pipe	AAWZR00	-	FOB	Chicago	Prompt Cycle	10,000	-	US Cents	Gallon
Intraday Gasoline CBOB Chicago pipe vs NYMEX RBOB	AAWZR01	-	FOB	Chicago	Prompt Cycle	10,000	-	US Cents	Gallon
Intraday Gasoline CBOB Group 3 pipe	AAWZS00	-	FOB	Tulsa, OK	Next business day	10,000	-	US Cents	Gallon
Intraday Gasoline CBOB Group 3 pipe vs NYMEX RBOB	AAWZS01	-	FOB	Tulsa, OK	Next business day	10,000	-	US Cents	Gallon
Intraday Gasoline RBOB Chicago pipe	AAWZV00	-	FOB	Chicago	Prompt Cycle	10,000	-	US Cents	Gallon
Intraday Gasoline RBOB Chicago pipe vs NYMEX RBOB	AAWZV01	-	FOB	Chicago	Prompt Cycle	10,000	-	US Cents	Gallon

GASOLINE									
Assessment	Code	Mavg	Contract basis	Location	Delivery period	Min size	Max size	Currency	UOM
US West Coast									
Gasoline CARBOB 84 Los Angeles CA pipeline	AAKYJ00	AAKYK00	FOB	Los Angeles	Any pipeline Cycle	25000	25000	US Cents	Gallon
Gasoline CARBOB Unl vs NYMEX RBOB	AANVX00	AANVX03	FOB	Los Angeles	Any pipeline Cycle	25,000	25000	US Cents	Gallon
Gasoline CARBOB 88.5 Los Angeles CA pipeline	AAKYL00	AAKYM00	FOB	Los Angeles	Any pipeline Cycle	10,000	25,000	US Cents	Gallon
Gasoline Unl 84 Suboctane Los Angeles CA pipeline	AAUHA00	AAUHA03	FOB	Los Angeles	Any pipeline Cycle	10,000	25,000	US Cents	Gallon
Gasoline Prem Unl Suboctane Los Angeles CA pipeline	PGABG00	PGABG03	FOB	Los Angeles	Any pipeline Cycle	10,000	25,000	US Cents	Gallon
Gasoline RBOB 84 Arizona pipeline	AADDP00	AADDQ00	FOB	Los Angeles	Any pipeline Cycle	10,000	25,000	US Cents	Gallon
Gasoline RBOB 88.5 Arizona pipeline	PPXDJ00	PPXD003	FOB	Los Angeles	Any pipeline Cycle	10,000	25,000	US Cents	Gallon
Gasoline Reg Unl USWC Cargo	PGADI00	PGADI03	CIF	Los Angeles	14-21 days forward	50,000	-	US Cents	Gallon
Gasoline CARBOB 85.5 San Francisco CA pipeline	AAKYN00	AAKY000	FOB	San Francisco	Any pipeline Cycle	10,000	25,000	US Cents	Gallon
Gasoline CARBOB 90 San Francisco CA pipeline	AAKYP00	AAKYQ00	FOB	San Francisco	Any pipeline Cycle	10,000	25,000	US Cents	Gallon
Gasoline Reg Unl Suboctane San Francisco CA pipeline	PGADG00	PGADG03	FOB	San Francisco	Any pipeline Cycle	10,000	25,000	US Cents	Gallon
Gasoline Prem Unl Suboctane San Francisco CA pipeline	PGAB000	PGAB003	FOB	San Francisco	Any pipeline Cycle	10,000	25,000	US Cents	Gallon
Gasoline Unl Suboctane Portland pipeline	AAXJC00	AAXJC03	FOB	Portland	1-4 days forward	10,000	25,000	US Cents	Gallon
Gasoline Premium Suboctane Portland pipeline	AAXJD00	AAXJD03	FOB	Portland	1-4 days forward	10,000	25,000	US Cents	Gallon
Gasoline Unl Suboctane Seattle pipeline	AAXJE00	AAXJE03	FOB	Seattle	1-4 days forward	10,000	25,000	US Cents	Gallon
Gasoline Premium Suboctane Seattle pipeline	AAXJF00	AAXJF03	FOB	Seattle	1-4 days forward	10,000	25,000	US Cents	Gallon
Intraday Gasoline CARBOB 85.5 Los Angeles pipe	AAVSB00	-	FOB	Los Angeles	Any pipeline Cycle	10,000	25,000	US Cents	Gallon
Intraday Gasoline CARBOB 85.5 Los Angeles pipe vs NYMEX RBOB	AAVSBDF	-	FOB	Los Angeles	Any pipeline Cycle	10,000	25,000	US Cents	Gallon
Latin America									
Gasoline CIF Eastern Mexico (\$/barrel)	AAXWA00	AAXWA03	CIF	Tuxpan	7-21 days forward	250,000	350,000	US\$	Barrel
Gasoline CIF Eastern Mexico (Pesos/liter)	AATFH00	AATFH03	CIF	Tuxpan	7-21 days forward	250,000	350,000	Mexico Pesos	Liter
Gasoline CIF Lazaro Cardenas (\$/barrel)	AATFD00	AATFD03	CIF	Lazaro Cardenas	21-35 days forward	250,000	350,000	US\$	Barrel
Gasoline CIF Lazaro Cardenas (Pesos/liter)	AATFN00	AATFN03	CIF	Lazaro Cardenas	21-35 days forward	250,000	350,000	Mexico Pesos	Liter
Gasoline CIF Rosarito (\$/barrel)	AATFA00	AATFA03	CIF	Rosarito	21-35 days forward	250,000	350,000	US\$	Barrel
Gasoline CIF Rosarito (Pesos/liter)	AATFK00	AATFK03	CIF	Rosarito	21-35 days forward	250,000	350,000	Mexico Pesos	Liter
Gasoline RON 93 CIF Ecuador	AAXYC00	AAXYC03	CIF	Esmeraldas	15-30 days forward	200,000	300,000	US\$	Barrel
Gasoline CFR Itaqui (\$/b)	BGITA00	BGITA03	CFR	Itaqui	15-30 days forward	250,000	350,000	US\$	Barrel
Gasoline CFR Itaqui (Real/cu m)	BGITB00	BGITB03	CFR	Itaqui	15-30 days forward	250,000	350,000	Real	Cubic meter
Gasoline CFR Suape (\$/b)	BGSUA00	BGSUA03	CFR	Suape	15-30 days forward	250,000	350,000	US\$	Barrel
Gasoline CFR Suape (Real/cu m)	BGSUB00	BGSUB03	CFR	Suape	15-30 days forward	250,000	350,000	Real	Cubic meter
Gasoline CFR Aratu (\$/b)	BGARA00	BGARA03	CFR	Aratu	15-30 days forward	250,000	350,000	US\$	Barrel
Gasoline CFR Aratu (Real/cu m)	BGARB00	BGARB03	CFR	Aratu	15-30 days forward	250,000	350,000	Real	Cubic meter
Gasoline CFR Santos (\$/b)	BGSAA00	BGSAA03	CFR	Santos	15-30 days forward	250,000	350,000	US\$	Barrel
Gasoline CFR Santos (Real/cu m)	BGSAB00	BGSAB03	CFR	Santos	15-30 days forward	250,000	350,000	Real	Cubic meter
Gasoline CFR Paranagua (\$/b)	BGPAA00	BGPAA03	CFR	Paranagua	15-30 days forward	250,000	350,000	US\$	Barrel
Gasoline CFR Paranagua (Real/cu m)	BGPAB00	BGPAB03	CFR	Paranagua	15-30 days forward	250,000	350,000	Real	Cubic meter

GASOLINE

Assessment	Code	Mavg	Contract basis	Location	Delivery period	Min size	Max size	Currency	UOM
Gasoline Manaus Import Parity Price \$/bbl	BGMAA00	BGMAA03	-	Manaus	-	-	-	US\$	Barrel
Gasoline Manaus Import Parity Price BRL/CBM	BGMAB00	BGMAB03	-	Manaus	-	-	-	Real	Cubic meter
Gasoline IPP Itaquí (\$/b)	BGITC00	BGITC03	-	Itaquí	-	-	-	US\$	Barrel
Gasoline IPP Itaquí (Real/cu m)	BGITD00	BGITD03	-	Itaquí	-	-	-	Real	Cubic meter
Gasoline IPP Suape (\$/b)	BGSUC00	BGSUC03	-	Suape	-	-	-	US\$	Barrel
Gasoline IPP Suape (Real/cu m)	BGSUD00	BGSUD03	-	Suape	-	-	-	Real	Cubic meter
Gasoline IPP Aratu (\$/b)	BGARC00	BGARC03	-	Aratu	-	-	-	US\$	Barrel
Gasoline IPP Aratu (Real/cu m)	BGARD00	BGARD03	-	Aratu	-	-	-	Real	Cubic meter
Gasoline IPP Santos (\$/b)	BGSAC00	BGSAC03	-	Santos	-	-	-	US\$	Barrel
Gasoline IPP Santos (Real/cu m)	BGSAD00	BGSAD03	-	Santos	-	-	-	Real	Cubic meter
Gasoline IPP Paranaguá (\$/b)	BGPAC00	BGPAC03	-	Paranaguá	-	-	-	US\$	Barrel
Gasoline IPP Paranaguá (Real/cu m)	BGPAD00	BGPAD03	-	Paranaguá	-	-	-	Real	Cubic meter
Gasoline Tramandai Import Parity Price \$/bbl	BGTRA00	BGTRA03	-	Tramandai	-	-	-	Real	Cubic meter
Gasoline Tramandai Import Parity Price BRL/CBM	BGTRB00	BGTRB03	-	Tramandai	-	-	-	Real	Cubic meter
Gasoline Guamare Import Parity Price \$/bbl	BGGUA00	BGGUA03	-	Guamare	-	-	-	Real	Cubic meter
Gasoline Guamare Import Parity Price BRL/CBM	BGGUB00	BGGUB03	-	Guamare	-	-	-	Real	Cubic meter
Gasoline Duque de Caxias Import Parity Price \$/bbl	BGDEA00	BGDEA03	-	Duque de Caxias	-	-	-	Real	Cubic meter
Gasoline Duque de Caxias Import Parity Price BRL/CBM	BGDEB00	BGDEB03	-	Duque de Caxias	-	-	-	Real	Cubic meter
Gasoline Betim Import Parity Price \$/bbl	BGBTA00	BGBTA03	-	Betim	-	-	-	Real	Cubic meter
Gasoline Betim Import Parity Price BRL/CBM	BGBTB00	BGBTB03	-	Betim	-	-	-	Real	Cubic meter
Gasoline Cubatao Import Parity Price \$/bbl	BGCUA00	BGCUA03	-	Cubatao	-	-	-	Real	Cubic meter
Gasoline Cubatao Import Parity Price BRL/CBM	BGCUB00	BGCUB03	-	Cubatao	-	-	-	Real	Cubic meter
Gasoline Maua Import Parity Price \$/bbl	BGMUA00	BGMUA03	-	Maua	-	-	-	Real	Cubic meter
Gasoline Maua Import Parity Price BRL/CBM	BGMUB00	BGMUB03	-	Maua	-	-	-	Real	Cubic meter
Gasoline Paulinia Import Parity Price \$/bbl	BGPLU00	BGPLU03	-	Paulinia	-	-	-	Real	Cubic meter
Gasoline Paulinia Import Parity Price BRL/CBM	BGPLB00	BGPLB03	-	Paulinia	-	-	-	Real	Cubic meter
Gasoline Sao Jose dos Campos Import Parity Price \$/bbl	BGSJA00	BGSJA03	-	Sao Jose dos Campos	-	-	-	Real	Cubic meter
Gasoline Sao Jose dos Campos Import Parity Price BRL/CBM	BGSJB00	BGSJB03	-	Sao Jose dos Campos	-	-	-	Real	Cubic meter
Gasoline Araucaria Import Parity Price \$/bbl	BGAUA00	BGAUA03	-	Araucaria	-	-	-	Real	Cubic meter
Gasoline Araucaria Import Parity Price BRL/CBM	BGAUB00	BGAUB03	-	Araucaria	-	-	-	Real	Cubic meter
Gasoline Canoas Import Parity Price \$/bbl	BGCNA00	BGCNA03	-	Canoas	-	-	-	Real	Cubic meter
Gasoline Canoas Import Parity Price BRL/CBM	BGCNB00	BGCNB03	-	Canoas	-	-	-	Real	Cubic meter
Futures									
Intraday NYMEX RBOB Mo01	XUHU100	-	FUTURES	-	1st Month NYMEX	-	-	US Cents	Gallon
Intraday NYMEX RBOB Mo02	XUHU200	-	FUTURES	-	2nd Month NYMEX	-	-	US Cents	Gallon

* The assessed date range may move further forward when pipeline scheduling is affected by long holiday weekends

Gasoline

Octane levels: In the US gasoline market, the octane level is defined as RON plus MON, divided by two, or (R+M)/2.

Reid Vapor Pressure specifications: Platts assesses various seasonal RVP grades depending on the time of year. Platts publishes supplemental assessments for some gasoline grades for brief periods of time in the spring and the fall on the US Atlantic Coast, and throughout the summer on the US Gulf Coast, as the markets transition to and from winter and summer grades. Specific dates for the changing of RVP specifications cannot be projected with sharp accuracy, because they will fluctuate based on pipeline cycles and terminal operations. Platts announces changes to RVP specifications as soon as possible ahead of implementing them. A reference calendar for US gasoline RVP changes can also be found at: https://www.spglobal.com/platts/plattscontent/_assets/_files/en/our-methodology/methodology-specifications/us-gasoline-rvp-calendar.xlsx.

US Gulf Coast

Pipeline assessments

These reflect product moving on Colonial Pipeline with input at Pasadena, Texas. Shipments on Colonial Pipeline are scheduled according to cycles. There are typically six cycles per month, for a total of 72 cycles per year. For example, cycles 1, 2, 3, 4, 5, and 6 are for January, cycles 7, 8, 9, 10, 11, and 12 are for February, etc. Each scheduling cycle lasts an average of five days. Due to market conditions, cycles may carry premiums or discounts versus the next shipment. The cycle schedule is dictated by Colonial Pipeline, and is subject to change during the course of the year. The cycles among products differ. For example, the gasoline 13th cycle and distillate 13th cycle may not necessarily be in alignment.

For gasoline assessments, Platts rolls over premium conventional, RBOB (Reformulated Blendstock for Oxygenate

Blending) and CBOB (Conventional Blendstock for Oxygenate Blending) grades in conjunction with new cycle changes for regular conventional unleaded 87 gasoline. This is done to eliminate misalignments between the various gasoline products' RVP levels, NYMEX basis months and regrade values. During the summer, however, premium conventional gasoline is only shipped, and assessed, on every other cycle.

Platts publishes outright price assessments for all products, as well as differentials to the relevant futures contracts for key products. The differentials are published versus the same futures contract month that forms the basis of the outright price assessments.

Platts USGC gasoline pipeline assessments reflect Colonial Pipeline specifications.

Unleaded 87 gasoline: These assessments reflect Colonial Pipeline's specifications for conventional M-grade gasoline, which has an octane of minimum 87.

Unleaded 89 gasoline: This assessment reflects conventional gasoline with an octane of minimum 89. This assessment is derived from the value of unleaded 87 gasoline (60%) and unleaded 93 gasoline (40%).

Unleaded 93 gasoline: This assessment reflects Colonial Pipeline's specifications for conventional V-grade gasoline, which has an octane of minimum 93.

Regular RBOB 83.7: These assessments reflect Colonial Pipeline's regular F-grade RBOB, which has an octane of minimum 87 after blending with 10% denatured fuel ethanol.

Premium RBOB 91.4: This assessment reflects Colonial Pipeline's premium H-grade RBOB, which has an octane of minimum 93 after blending with 10% denatured fuel ethanol.

Regular CBOB 87: These assessments reflect Colonial Pipeline's

regular A-grade CBOB, which has octane of minimum 87 after blending with 10% denatured fuel ethanol.

Premium CBOB 93: These assessments reflect Colonial Pipeline's premium D-grade CBOB, which has octane of minimum 93 after blending with 10% denatured fuel ethanol.

Waterborne assessments

These reflect a minimum volume of 50,000 barrels and a maximum volume of 125,000 barrels, for loading 10 to 18 days forward from the date of publication. The barrels are expected to meet Colonial Pipeline's product specifications.

USGC waterborne assessments are basis Beaumont/Port Arthur, Lake Charles, and the greater Houston area which includes Texas City, Deer Park, Pasadena and Houston. Other loading points including Corpus Christi, New Orleans, Baton Rouge and Pascagoula, may be considered for assessments but this information may be normalized back to the three main USGC loading areas.

This market is assessed on an FOB basis. The most open and representative bid will simply be for gasoline at a generic USGC loading point. Bids that request individual loading ports may be viewed as restrictive and may be subject to normalization.

In a USGC waterborne transaction, the seller nominates the port and terminal in the USGC area and informs the buyer within five days of the first day of the three-day laycan. The buyer then nominates the vessel and the loading dates within the three-day laycan, pending terminal acceptance.

Platts uses the prompt cycle pipeline assessment for unleaded 87 gasoline as the basis to determine its waterborne assessment for gasoline. Applicable premiums or discounts for waterborne product will be added or subtracted from the primary pipeline assessment.

Colonial Line Space

Platts assesses the value of line space for distillates and gasoline on three major Colonial Pipeline segments between Pasadena, Texas, and Linden, New Jersey. They reflect the premium or discount paid during the exchange of product at two locations along Colonial's Line 1 and/or Line 3, as well as Line 2 and/or Line 3. The assessments are linked with cycle numbers on the Colonial Pipeline schedule. The assessments reflect the transfer of a minimum of 25,000 barrels of distillates or gasoline, and are not limited to any specific product. The buyer of the line space determines which product is shipped.

RVP adjustments

Platts assesses the value of a 1-psi difference from a given RVP specification for US Gulf Coast gasoline low-octane and high-octane blendstocks. This specification will change through the year on the following schedule:

- 1 psi below 14.5 RVP starting the first business day of February until the USGC CBOB assessment moves to 12.5 RVP
- 1 psi below 12.5 RVP until the USGC CBOB assessment moves to 10 RVP
- 1 psi below 10 RVP until the last business day of August
- 1 psi above 10 RVP starting the first business day of September, until the USGC CBOB assessment moves to 12.5 RVP
- 1 psi above 12.5 RVP until the USGC CBOB assessment moves to 14.5 RVP
- 1 psi above 14.5 RVP until the last business day of January

US Atlantic Coast

Platts assesses barrels coming off Colonial Pipeline's Line 3 running from Greensboro, North Carolina to Linden, New Jersey; barrels loading into the Buckeye Pipeline at Linden, New Jersey,

and the Laurel Pipeline at Boothwyn, Pennsylvania; and barges and cargoes in New York Harbor and Boston.

Platts publishes outright price assessments for all products as well as differentials to the relevant futures contracts for key products. The differentials are published versus the same futures contract month that forms the basis of the outright price assessments. Rollover dates on the US Atlantic Coast are the last trading day of the month.

Colonial Pipeline Linden assessments

Platts Colonial Pipeline Linden assessments are basis Linden and reflect Colonial Pipeline specifications at the delivery point, which can be anywhere along Line 3.

Shipments on Colonial Pipeline are scheduled according to cycles. There are typically six cycles per month, for a total of 72 cycles per year. Platts assesses the first full Colonial cycle prior to arrival at the start of Line 3 in Greensboro, North Carolina. For example, if Cycle 1 RBOB gasoline is to start pumping at Greensboro on January 23, Platts would assess C1 until January 22 and then roll to C2 on January 23. If the Colonial Pipeline schedule were to change, Platts would adjust the cycle roll date in line with the schedule. CBOB, RBOB and conventional 87 gasoline assessments will all reflect product being delivered on the same cycle.

Buckeye and Laurel assessments

Buckeye and Laurel pipeline assessments reflect gasoline for loading three to seven days forward from the date of publication Monday to Wednesday, and five to nine days forward on Thursday and Friday. The assessed date range may move further forward when pipeline scheduling is affected by long holiday weekends. Platts will announce these changes prior to implementation. Buckeye and Laurel pipeline assessments reflect a minimum volume of 25,000 barrels and a maximum volume of 75,000 barrels.

For bids or offers submitted during the Platts Market on Close assessment process on the Buckeye Pipeline, the bidder must

provide a Buckeye batch number. The seller must be willing to deliver on a batch provided by the buyer during the three-day laycan. For positions on a barge/Buckeye basis, the market maker must be willing to deliver or accept either a barge or pipeline barrel at the counterparty's choice.

Platts Buckeye and Laurel gasoline pipeline assessments reflect specifications published by Buckeye Partners.

Regular RBOB: These assessments reflect Buckeye's specifications for regular RBOB, which has an octane of minimum 87 after blending with 10% denatured fuel ethanol.

Premium RBOB (PBOB): These assessments reflect Buckeye's specifications for premium RBOB, which has an octane of minimum 93 after blending with 10% denatured fuel ethanol.

Regular CBOB: These assessments reflect Buckeye's specifications for regular grades of conventional gasoline suboctane, which have an octane of minimum 87 after blending with 10% denatured fuel ethanol.

Premium CBOB: These assessments reflect premium grades of conventional gasoline suboctane, which have an octane of minimum 93 after blending with 10% denatured fuel ethanol.

Platts also publishes ratable assessments for CBOB and RBOB on the Buckeye Pipeline for the first full month forward from the date of publication. A ratable contract stipulates that a seller will supply 25,000 barrels of CBOB or RBOB per cycle throughout the contractual month.

Barge assessments

These reflect product loading three to seven days forward from the date of publication, on an FOB New York Harbor basis. The CBOB and RBOB barge assessments reflect a minimum volume of 25,000 barrels and a maximum volume of 100,000 barrels. All other FOB NYH barge assessments for conventional gasoline grades, premium CBOB and premium RBOB, reflect volumes of

25,000-75,000 barrels. For barge assessments with a volume range of 25,000-75,000 barrels, values in the 25,000-50,000 barrel range will take priority in the assessment.

Platts USAC barge assessments reflect market activity where the seller nominates a loading terminal three days ahead of the first day of a three-day laycan, including at least two full business days. Additionally, the buyer must nominate to the seller a barge and loading date two days prior to intended day of loading within the stipulated three-day laycan. This period should include at least one full business day. The nomination should be submitted prior to 10:30 am ET. The seller should give notice of clearance, pending terminal acceptance of the barge nomination within six hours of receipt of buyer's nomination.

Cargo assessments

These reflect product for delivery five to 15 days forward from the date of publication. They are assessed on a delivered basis into NYH and Boston, with a minimum volume of 150,000 barrels. Platts USAC gasoline cargo assessments are published on both an inside-duty basis and an ex-duty basis.

Inside-duty assessments are inclusive of import duties and RINs credits. Platts also publishes an assessment of the gasoline duty, RINs, and importing fees value called Duty+RINs. The value of RINs credits is derived from the RINs calendar-year assessments published by Platts. Platts factors in the RIN value corresponding to the current calendar year.

Ex-duty assessments are published for conventional gasoline, CBOB and RBOB. These ex-duty assessments are exclusive of RINs, import duty and any importing fees. The duty component of this assessment consists of a Harbor Maintenance Fee, Merchandising Process Fee, Spill Tax and duty. Duty is applied at the level published in the Harmonized Tariff Schedule by the United States International Trade Commission. Spill Tax is applied at the level set by the Oil Spill Liability Trust Fund. The spill tax expired on December 31, 2018, and was removed from the calculation. It was reinstated in 2020 and subsequently

included in the calculation. The Merchandising Processing Fee and Harbor Maintenance Fee are established by the Internal Revenue Service and collected by the US Customs and Border Protection.

Chicago

Pipeline assessments

These reflect product delivered in Chicago via pipeline, for a minimum volume of 10,000 barrels. Since July 2, 2018, the Chicago pipeline assessments have reflected the lowest value between the Badger, West Shore and Wolverine pipelines. Bids, offers or trades for locations other than Badger, West Shore and Wolverine may be included in the assessment process but will be normalized back to the same basis.

BCX assessments

These reflect product at the Buckeye Complex storage hub in the Chicago area, for a minimum volume of 10,000 barrels. Bids, offers and trades for other pipelines or terminals may be normalized back to the BCX basis for assessment purposes.

For both Chicago pipeline and BCX assessments, Platts has established cycle changes every 10 days, on the 5th, 15th, and 25th of the month. The assessments reflect product moving on the prompt cycle.

Platts publishes outright price assessments for all products, as well as differentials to the relevant futures contracts for key products. The differentials are published versus the same futures contract month that forms the basis of the outright price assessments. In Chicago, rollover dates will align with Explorer Pipeline's cycle schedule.

Regular unleaded: Octane of minimum 87; lead of maximum 0.01 g/gallon; gravity of 62 API.

Midgrade unleaded: Octane of minimum 89; lead of maximum 0.01 g/gallon; gravity of 62 API. This assessment is derived

from the value of unleaded 87 gasoline (60%) and unleaded 91 gasoline (40%)

Premium unleaded: Octane of minimum 91; lead of maximum 0.01 g/gallon; gravity of 62 API.

CBOB: Octane of minimum 87 after blending with 10% denatured fuel ethanol; all other specifications follow Explorer Pipeline specifications for CBOB.

RBOB: Octane of minimum 84.6; gravity of 62 API.

PBOB: Octane of minimum 91.4.

Group 3

Assessments reflect product moving on the Magellan Pipeline system on an FOB Tulsa, Oklahoma, basis.

Assessments reflect market activity on the next business day from the date of publication. The suboctane assessments reflect a minimum volume of 10,000 barrels, while the premium gasoline assessment reflects a minimum volume of 5,000 barrels.

Platts publishes outright price assessments for all products, as well as differentials to the relevant futures contracts for key products. The differentials are published versus the same futures contract month that forms the basis of the outright price assessments. Rollover dates in Group 3 are the last trading day of the month.

Platts Group 3 gasoline assessments reflect specifications published by Magellan Midstream Partners.

Regular suboctane: These assessments reflect Magellan Pipeline's specifications for V-grade suboctane, which has an octane of minimum 87 after blending with 10% denatured fuel ethanol.

Premium unleaded 91 gasoline: This assessment reflects Magellan Pipeline's specifications for A-grade premium unleaded gasoline, which has an octane of minimum 91.

US West Coast

Pipeline assessments

These reflect product moving on the Kinder Morgan Energy Partners Pipeline system in California and Arizona; and on the Olympic Pipeline system in the Pacific Northwest. The assessments reflect a minimum volume of 25,000 barrels for Los Angeles CARBOB 84 and 10,000 barrels for other grades, and a maximum volume of 25,000 barrels for all grades.

Los Angeles and San Francisco pipeline assessments

Shipments on the Kinder Morgan pipeline are scheduled according to cycles. There are typically four cycles every month for a total of 48 cycles per year. For example, cycles 1, 2, 3 and 4 are for January, cycles 5, 6, 7 and 8 are for February, etc. Each cycle lasts approximately 7.5 days, but changes in the schedule may occur. Platts assesses an "any-barrel," which can be scheduled for any cycle during the current month.

Platts assessments in California reflect Kinder Morgan's Pacific pipeline specifications.

Regular suboctane: These assessments reflect Kinder Morgan pipeline's specifications for suboctane unleaded regular gasoline, which has an octane of minimum 87 after blending with 10% denatured fuel ethanol.

Premium suboctane: These assessments reflect Kinder Morgan pipeline's specifications for suboctane unleaded premium gasoline, which has an octane of minimum 92 after blending with 10% denatured fuel ethanol.

Regular CARBOB: California Reformulated Gasoline Blendstock for Oxygenate Blending (CARBOB) is a special RBOB formula mandated by the state of California. It is blended with ethanol

to produce finished gasoline that meets the standards of the California Air Resources Board. These assessments reflect Kinder Morgan's specifications for regular CARBOB which has an octane of minimum 87 after blending with 10% denatured fuel ethanol.

Premium CARBOB: These assessments reflect Kinder Morgan's specifications for premium CARBOB which has an octane of minimum 91 after blending with 10% denatured fuel ethanol.

Arizona pipeline assessments

Platts assesses two Arizona RBOB grades, also known as AZRBOB, on an FOB Los Angeles basis for use in the Phoenix, Arizona, market.

Regular AZRBOB: This assessment reflects Kinder Morgan's specifications for regular AZRBOB, which has an octane of minimum 87 after blending with 10% denatured fuel ethanol.

Premium AZRBOB: This assessment reflects Kinder Morgan's specifications for premium AZRBOB, which has an octane of minimum 91 after blending with 10% denatured fuel ethanol.

Portland and Seattle pipeline assessments

Shipments on the Olympic Pipeline system are also scheduled according to cycles. There are typically five cycles every month with the exception of February, which has four, for a total of 59 cycles per year. Each cycle lasts approximately six to seven days, but changes in the schedule may occur. Portland and Seattle product assessments reflect prompt market activity, one to four days forward from the date of publication.

Platts assessments in Portland and Seattle reflect Olympic Pipeline specifications.

Regular suboctane: These assessments reflect Olympic Pipeline's specifications for unleaded regular suboctane gasoline (Segment 1 for Seattle; and Segments 2 and 3 for Portland), which has an octane of minimum 87 after blending with 10%

denatured fuel ethanol.

Premium suboctane: These assessments reflect Olympic Pipeline's specifications for unleaded premium suboctane gasoline (Segment 1 for Seattle; and Segments 2 and 3 for Portland), which has an octane of minimum 92 after blending with 10% denatured fuel ethanol.

Cargo assessment

The USWC cargo assessment, basis CIF Los Angeles, reflects a minimum volume of 50,000 barrels of unleaded 87 octane conventional gasoline, for delivery 14-21 days forward from the date of publication.

Latin America

Mexico gasoline: Platts assesses delivered gasoline into eastern and western Mexico. In eastern Mexico, Platts assesses an RBOB gasoline blend designated for use in Mexico City and meeting the country's specifications, on a CIF Tuxpan basis, for delivery seven to 21 days forward from the date of publication. In western Mexico, Platts assesses product meeting the country's specifications, on a CIF Lazaro Cardenas and CIF Rosarito basis, for delivery 21-35 days forward. All assessments reflect 250,000-350,000 barrel shipments, and are published in US dollars per barrel and the equivalent Mexico Pesos per liter value.

Ecuador gasoline: Platts assesses RON 93 gasoline on a CIF Esmeraldas basis, meeting Petroecuador's specifications, delivered 15-30 days forward in parcels of 200,000-300,000 barrels.

Delivered Brazil gasoline: Platts assesses gasoline meeting Brazil's specifications before blending with ethanol, in 250,000-350,000 barrel cargoes on a CFR basis to Itaqui, Suape, Aratu, Santos and Paranagua for delivery 15-30 days forward from the day of publication, with single port discharge. The assessments are published in \$/barrel and in Brazilian Real/cubic meter.

Brazil gasoline IPP: Platts also publishes import parity prices for gasoline meeting Brazil's specifications before blending with ethanol, at the following locations: Manaus, Itaquí, Suape, Aratu, Santos, Paranaguá, Tramandai, Guamáre, Duque de Caxias, Betim, Cubatao, Mauá, Paulínia, São José dos Campos, Araucária, Canoas. The price represents the cost of gasoline imported on the day of publication at each specified port. It includes the product value, freight, demurrage, insurance, losses, marine taxes, storage, trucking, multi-port discharge optionality and quality differences, where applicable. The prices are published in \$/barrel and in Brazilian Real/cubic meter.

BLENDSTOCKS

Assessment	Code	Mavg	Contract basis	Location	Delivery period	Min size	Max size	Currency	UOM
Alkylate DAP USGC barge	AAXBA00	AAXBA03	DAP	Houston	3-15 days forward	50,000	-	US Cents	Gallon
Alkylate DAP USGC barge blend value	AASFE00	AASFE03	DAP	Houston	3-15 days forward	50,000	-	US Cents	Gallon
Alkylate DAP USGC barge vs Gasoline Unl 87 USGC pipe	AAXBD00	AAXBD03	DAP	Houston	3-15 days forward	50,000	-	US Cents	Gallon
Alkylate DAP USGC barge vs USGC Unl87 waterborne	AAFIE00	AAFIF00	DAP	Houston	3-15 days forward	50,000	-	US Cents	Gallon
Raffinate DAP USGC barge	AAXBB00	AAXBB03	DAP	Houston	3-15 days forward	50,000	-	US Cents	Gallon
Raffinate DAP USGC barge blend value	AATAS00	AATAS03	DAP	Houston	3-15 days forward	50,000	-	US Cents	Gallon
Raffinate DAP USGC barge vs Gasoline Unl 87 USGC pipe	AAXBE00	AAXBE03	DAP	Houston	3-15 days forward	50,000	-	US Cents	Gallon
Raffinate DAP USGC barge vs USGC Gasoline Unl 87 waterborne	AAJMU00	AAJMU03	DAP	Houston	3-15 days forward	50,000	-	US Cents	Gallon
Reformat DAP USGC barge	AAXBC00	AAXBC03	DAP	Houston	3-15 days forward	50,000	-	US Cents	Gallon
Reformat DAP USGC barge blend value	AASFG00	AASFG03	DAP	Houston	3-15 days forward	50,000	-	US Cents	Gallon
Reformat DAP USGC barge vs Gasoline Unl 87 USGC pipe	AAXBF00	AAXBF03	DAP	Houston	3-15 days forward	50,000	-	US Cents	Gallon
Reformat DAP USGC barge vs USGC Gasoline Unl 87 waterborne	AAJMV00	AAJMV03	DAP	Houston	3-15 days forward	50,000	-	US Cents	Gallon

Blendstocks

Platts assesses the value of alkylate, reformat and raffinate, reflecting shipments of at least 50,000 barrels in size, basis DAP Houston, for delivery three to 15 days forward from the date of publication. Assessments are published as a flat price and as differentials to the Platts USGC unleaded 87 pipeline assessment and the Platts USGC unleaded 87 waterborne assessment.

Alkylate: RVP of 4-6 psi; octane of 92-93 (R+M)/2. Product specifications will be normalized to reflect value for 92 (R+M)/2 and 5 RVP barge for the assessment.

Reformat: Gravity of 30-55 API; RVP of 1-3 psi; sulfur of maximum 0.5%; octane of 98-102 (R+M)/2. Products specifications will be normalized to reflect value for a 100 (R+M)/2 and 1 RVP barge for the assessment.

Raffinate: Gravity of 60-70 API; RVP of maximum 5 psi; sulfur of maximum 0.5%; octane of 58-60 (R+M)/2. Product specifications will be normalized to reflect value for a barge at 60 (R+M)/2 and an RVP of 4 psi for the assessment.

NAPHTHA

Assessment	Code	Mavg	Contract basis	Location	Delivery period	Min size	Max size	Typical size	Currency	UOM
Barges										
Naphtha USGC barge	AALPG00	AALPH00	DAP	Houston	5-15 days forward	50,000		-	US Cents	Gallon
Naphtha USGC barge vs USGC unleaded waterborne	AASGZ00	AASGZ03	DAP	Houston	5-15 days forward	50,000		-	US Cents	Gallon
Naphtha USGC vs Maya crude	AASHA00	AASHA03	DAP	Houston	5-15 days forward	50,000		-	US Cents	Gallon
Naphtha USGC vs WTI	AAJND00	AAJND03	DAP	Houston	5-15 days forward	50,000		-	US Cents	Gallon
Heavy Naphtha USGC barge	AALPI00	AALPJ00	DAP	Houston	5-15 days forward	50,000		-	US Cents	Gallon
Heavy Naphtha USGC barge vs USGC unleaded waterborne	AASHD00	AASHD03	DAP	Houston	5-15 days forward	50,000		-	US Cents	Gallon
Light Straight Run Naphtha (cts/gal)	AAXQK00	AAXQK03	DAP	Houston	3-15 days forward	50,000		-	US Cents	Gallon
Light Straight Run Naphtha (\$/mt)	AAXQM00	AAXQM03	DAP	Houston	3-15 days forward	50,000		-	US\$	MT
Light Straight Run Naphtha barge vs Mt Belvieu non-Targa gasoline	AAXQN00	AAXQN03	DAP	Houston	3-15 days forward	50,000		-	US Cents	Gallon
Cargoes										
Naphtha FOB USGC (cts/gal)	AAXJP00	AAXJP03	FOB	Houston	7-21 days forward		-	250,000	US Cents	Gallon
Naphtha FOB USGC (\$/mt)	AAXJU00	AAXJU03	FOB	Houston	7-21 days forward		-	250,000	US\$	MT
Naphtha FOB Peru cargo	PAAAS00	PAAAS03	FOB	Talara / Pampilla	7-21 days forward	180,000	-	-	US\$	Barrel
Colombian diluent naphtha	AAXYB00	AAXYB03	DES	Colombia	15-30 days forward	170,000	180,000	-	US\$	Barrel

Naphtha

Platts assesses the value of naphtha trading on the US Gulf Coast on a DAP Houston and FOB Houston basis.

Barge assessments

The DAP standard and heavy naphtha assessments reflect a minimum volume of 50,000 barrels, for delivery five to 15 days forward from the date of publication. While the DAP Light straight run naphtha assessment reflects a minimum volume of 50,000 for a delivery three to 15 days forward from the date of publication. The barge assessments reflect market activity conforming to delivery within an agreed three-day delivery period. Platts uses the waterborne USGC conventional gasoline (M grade) assessment as the basis to determine its USGC naphtha barge assessments, reflecting market convention.

Standard naphtha: These assessments reflect the value of reforming grade naphtha, with an initial boiling point of 110 F minimum; 10% distillation, 175 F minimum; final boiling point

of 395 F maximum; color, +20 minimum; API, 63 maximum; RVP, 6 psi maximum; N+A, minimum 38% volume; nitrogen, 3 ppm maximum; sulfur, 350 ppm maximum; lead, 50 ppb maximum; oxygenates, 50 ppm maximum; chloride, 1 ppm maximum; olefin, maximum 1%; H₂S, less than 1 ppm liquids.

Heavy naphtha: These assessments reflect the value of reforming grade material, with an initial boiling point of 160 F minimum; 10% distillation, 175 F minimum; final boiling point of 395 F maximum; color, +20 minimum; API, 58 maximum; RVP, 3.5 psi maximum; N+A, minimum 38% volume; nitrogen, 3 ppm maximum; sulfur, 350 ppm maximum; lead, 50 ppb maximum; oxygenates, 50 ppm maximum; chloride, 1 ppm maximum; olefin, maximum 1%; H₂S, less than 1 ppm liquids.

Light straight run naphtha: These reflect the value of material with maximum 83 API gravity; maximum 250 ppm sulfur; 13 RVP maximum; minimum 65% paraffin content; minimum color of 20; maximum 50 ppm oxygenates; maximum 10 ppm mercury; maximum 50 ppm lead; and maximum 10 ppm H₂S.

Cargo assessment

The FOB USGC naphtha assessment reflects the value of 250,000-barrel cargoes exported from the US Gulf Coast with the following specifications: N+A: minimum 38% volume; initial boiling point: minimum 110 F; 10% distillation: minimum 155 F; final boiling point: maximum 395 F; API: maximum 63; sulfur: maximum 350 ppm; color: minimum +20; RVP: maximum 6 psi; nitrogen: maximum 3 ppm; lead: maximum 50 ppb; oxygenates: maximum 50 ppm; chloride: 1 ppm maximum; olefin: maximum 1%; H₂S: less than 1 ppm liquids.

Latin America

Peru naphtha: This assessment reflects the value of cargoes of at least 180,000 barrels, loading basis FOB Talara or Pampilla seven to 21 days forward from the date of publication. The assessment reflects full range naphtha, typical N+A of minimum 42% volume, and gravity of minimum 57 API. Typically, Platts analyzes the value of Peruvian naphtha as a differential to its USGC waterborne unleaded 87 octane gasoline assessment, and

publishes the final assessment as an outright price in US dollars per barrel.

Colombia naphtha: Platts assesses diluent naphtha meeting Ecopetrol's specifications on a DES Colombia basis for product delivered 15-30 days forward in parcels of 170,000-180,000 barrels.

JET FUEL

Assessment	Code	Mavg	Contract basis	Location	Delivery period	Min size	Max size	Currency	UOM
US Gulf Coast									
Jet Kero 54 USGC prompt pipeline	PJAB000	PJAB003	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Jet Kero 54 USGC prompt pipeline vs NYMEX ULSD	ADIAS00	ADIAS03	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Jet Kero 54 USGC pipeline Cycle 01	AAELQ00	AAFOY00	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Jet Kero 54 USGC pipeline Cycle 02	AAELR00	AAFOZ00	FOB	Houston	Forward Cycle	25,000	-	US Cents	Gallon
Jet Kero 54 USGC pipeline Cycle 03	AAELS00	AAFSX00	FOB	Houston	Forward Cycle	25,000	-	US Cents	Gallon
Jet Kero 54 USGC pipeline Cycle 04	AAELT00	AAFSY00	FOB	Houston	Forward Cycle	25,000	-	US Cents	Gallon
Jet Kero 54 USGC pipeline Cycle 05	AAELU00	AAFSZ00	FOB	Houston	Forward Cycle	25,000	-	US Cents	Gallon
Jet Kero 54 USGC pipeline Cycle 06	AAELV00	AAFTA00	FOB	Houston	Forward Cycle	25,000	-	US Cents	Gallon
Jet Kero 54 USGC waterborne	PJABM00	PJABM03	FOB	Houston	10-18 days forward	50,000	125,000	US Cents	Gallon
Jet Kero 55 USGC prompt pipeline	PJABP00	PJABP03	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Jet Kero 55 USGC waterborne	PJABN00	PJABN03	FOB	Houston	10-18 days forward	50,000	125,000	US Cents	Gallon
Jet Kero ULS USGC prompt pipeline	AAVTL00	AAVTL03	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Jet Kero ULS USGC waterborne	AAVTK00	AAVTK03	FOB	Houston	10-18 days forward	50,000	125,000	US Cents	Gallon
US Atlantic Coast									
Jet kero 54 USAC Linden pipeline prompt	AAXPV00	AAXPV03	FOB	NYH	First Full Cycle	25,000	-	US Cents	Gallon
Jet Kero New Jersey Buckeye Pipeline	AAJNL00	AAJNM00	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Jet Kero New Jersey Buckeye Pipeline vs NYMEX ULSD	ADIEA00	ADIEA03	FOB	NYH	3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Jet Kero New York Harbor barge	PJAAW00	PJAAW03	FOB	NYH	3-7 days	25,000	100,000	US Cents	Gallon
Jet Kero New York Harbor barge vs NYMEX ULSD	ADIGA00	ADIGA03	FOB	NYH	3-7 days	25,000	100,000	US Cents	Gallon
Jet Kero LS New Jersey Buckeye Pipeline	AAJNN00	AAJNO00	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	US Cents	Gallon
Jet Kero LS New York Harbor barge	PJABJ00	PJABJ03	FOB	NYH	3-7 days	25,000	75,000	US Cents	Gallon
Jet Kero ULS New York Harbor Barge	AAVTI00	AAVTI03	FOB	NYH	3-7 days	25,000	75,000	US Cents	Gallon
Midwest									
Jet Kero Chicago pipeline	PJAAF00	PJAAF03	FOB	Chicago	Prompt Cycle	10,000	-	US Cents	Gallon
Jet Kero Chicago pipeline vs NYMEX ULSD	ADILA00	ADILA03	FOB	Chicago	Prompt Cycle	10,000	-	US Cents	Gallon
Jet Kero ULS No 1 Chicago pipeline	PJACD00	AAFZR00	FOB	Chicago	Prompt Cycle	10,000	-	US Cents	Gallon
Jet Kero Group 3 pipeline	PJAAI00	PJAAI03	FOB	Tulsa, OK	1-3 days forward	5,000	-	US Cents	Gallon
Jet Kero Group 3 pipeline vs NYMEX ULSD	ADIKA00	ADIKA03	FOB	Tulsa, OK	1-3 days forward	5,000	-	US Cents	Gallon
Jet Kero ULS No 1 Group 3 pipeline	PJACB00	AAFZQ00	FOB	Tulsa, OK	1-3 days forward	5,000	-	US Cents	Gallon
US West Coast									
Jet Kero Los Angeles pipeline	PJAAP00	PJAAP03	FOB	Los Angeles	Any pipeline cycle	25,000	-	US Cents	Gallon
Jet Kero Los Angeles pipeline vs NYMEX ULSD	AANVY00	AANVY03	FOB	Los Angeles	Any pipeline cycle	25,000	-	US Cents	Gallon
Jet Kero San Francisco pipeline	PJABC00	PJABC03	FOB	San Francisco	Any pipeline cycle	10,000	25,000	US Cents	Gallon
Jet Kero Seattle pipeline	PJABB00	PJABB03	FOB	Seattle	1-4 days forward	10,000	25,000	US Cents	Gallon
Jet Kero USWC waterborne	PJABI00	PJABI03	CIF	Los Angeles	14-21 days forward	50,000	-	US Cents	Gallon
Caribbean & Latin America									
Jet Kero Caribbean cargo (\$/mt)	PJAAD00	PJAAD03	FOB	Caribbean	7-21 days forward	200,000	300,000	US\$	MT
Jet Kero Caribbean cargo (cts/gal)	PJAAD10	PJAAD13	FOB	Caribbean	7-21 days forward	200,000	300,000	US Cents	Gallon
Jet CIF Eastern Mexico (\$/barrel)	AATFG00	AATFG03	CIF	Tuxpan	7-21 days forward	250,000	350,000	US\$	Barrel
Jet CIF Eastern Mexico (Pesos/liter)	AATFJ00	AATFJ03	CIF	Tuxpan	7-21 days forward	250,000	350,000	Mexico Pesos	Liter
Jet CIF Lazaro Cardenas (\$/barrel)	AATFF00	AATFF03	CIF	Rosarito	21-35 days forward	250,000	350,000	US\$	Barrel
Jet CIF Lazaro Cardenas (Pesos/liter)	AATFP00	AATFP03	CIF	Rosarito	21-35 days forward	250,000	350,000	Mexico Pesos	Liter
Jet CIF Rosarito (\$/barrel)	AATFC00	AATFC03	CIF	Lazaro Cardenas	21-35 days forward	250,000	350,000	US\$	Barrel
Jet CIF Rosarito (Pesos/liter)	AATFM00	AATFM03	CIF	Lazaro Cardenas	21-35 days forward	250,000	350,000	Mexico Pesos	Liter

JET FUEL

Assessment	Code	Mavg	Contract basis	Location	Delivery period	Min size	Max size	Currency	UOM
Jet CFR Itaqui (\$/b)	AJAB00	AJAB03	CFR	Itaqui	15-30 days forward	250,000	350,000	US\$	Barrel
Jet CFR Itaqui (Real/cu m)	AJABB00	AJABB03	CFR	Itaqui	15-30 days forward	250,000	350,000	Real	Cubic meter
Jet CFR Suape (\$/b)	AJAAE00	AJAAE03	CFR	Suape	15-30 days forward	250,000	350,000	US\$	Barrel
Jet CFR Suape (Real/cu m)	AJABE00	AJABE03	CFR	Suape	15-30 days forward	250,000	350,000	Real	Cubic meter
Jet CFR Aratu (\$/b)	AJAAA00	AJAAA03	CFR	Aratu	15-30 days forward	250,000	350,000	US\$	Barrel
Jet CFR Aratu (Real/cu m)	AJABA00	AJABA03	CFR	Aratu	15-30 days forward	250,000	350,000	Real	Cubic meter
Jet CFR Santos (\$/b)	AJAAD00	AJAAD03	CFR	Santos	15-30 days forward	250,000	350,000	US\$	Barrel
Jet CFR Santos (Real/cu m)	AJABD00	AJABD03	CFR	Santos	15-30 days forward	250,000	350,000	Real	Cubic meter
Jet CFR Paranagua (\$/b)	AJAAC00	AJAAC03	CFR	Paranagua	15-30 days forward	250,000	350,000	US\$	Barrel
Jet CFR Paranagua (Real/cu m)	AJABC00	AJABC03	CFR	Paranagua	15-30 days forward	250,000	350,000	Real	Cubic meter
Jet Manaus Import Parity Price \$/bbl	BJMAA00	BJMAA03	-	Manaus	-	-	-	US\$	Barrel
Jet Manaus Import Parity Price BRL/CBM	BJMAB00	BJMAB03	-	Manaus	-	-	-	Real	Cubic meter
Jet IPP Itaqui (\$/b)	BJADB00	BJADB03	-	Itaqui	-	-	-	US\$	Barrel
Jet IPP Itaqui (Real/cu m)	BJAEB00	BJAEB03	-	Itaqui	-	-	-	Real	Cubic meter
Jet IPP Suape (\$/b)	BJADE00	BJADE03	-	Suape	-	-	-	US\$	Barrel
Jet IPP Suape (Real/cu m)	BJAEE00	BJAEE03	-	Suape	-	-	-	Real	Cubic meter
Jet IPP Aratu (\$/b)	BJADA00	BJADA03	-	Aratu	-	-	-	US\$	Barrel
Jet IPP Aratu (Real/cu m)	BJAEA00	BJAEA03	-	Aratu	-	-	-	Real	Cubic meter
Jet IPP Santos (\$/b)	BJADD00	BJADD03	-	Santos	-	-	-	US\$	Barrel
Jet IPP Santos (Real/cu m)	BJAED00	BJAED03	-	Santos	-	-	-	Real	Cubic meter
Jet IPP Paranagua (\$/b)	BJADC00	BJADC03	-	Paranagua	-	-	-	US\$	Barrel
Jet IPP Paranagua (Real/cu m)	BJAEC00	BJAEC03	-	Paranagua	-	-	-	Real	Cubic meter
Jet Tramandai Import Parity Price \$/bbl	BJTRA00	BJTRA03	-	Tramandai	-	-	-	US\$	Barrel
Jet Tramandai Import Parity Price BRL/CBM	BJTRB00	BJTRB03	-	Tramandai	-	-	-	Real	Cubic meter
Jet Guamare Import Parity Price \$/bbl	BJGUA00	BJGUA03	-	Guamare	-	-	-	US\$	Barrel
Jet Guamare Import Parity Price BRL/CBM	BJGUB00	BJGUB03	-	Guamare	-	-	-	Real	Cubic meter
Jet Duque de Caxias Import Parity Price \$/bbl	BJDEA00	BJDEA03	-	Duque de Caxias	-	-	-	US\$	Barrel
Jet Duque de Caxias Import Parity Price BRL/CBM	BJDEB00	BJDEB03	-	Duque de Caxias	-	-	-	Real	Cubic meter
Jet Betim Import Parity Price \$/bbl	BJBTA00	BJBTA03	-	Betim	-	-	-	US\$	Barrel
Jet Betim Import Parity Price BRL/CBM	BJBTB00	BJBTB03	-	Betim	-	-	-	Real	Cubic meter
Jet Cubatao Import Parity Price \$/bbl	BJCUA00	BJCUA03	-	Cubatao	-	-	-	US\$	Barrel
Jet Cubatao Import Parity Price BRL/CBM	BJCUB00	BJCUB03	-	Cubatao	-	-	-	Real	Cubic meter
Jet Maua Import Parity Price \$/bbl	BJMUA00	BJMUA03	-	Maua	-	-	-	US\$	Barrel
Jet Maua Import Parity Price BRL/CBM	BJMUB00	BJMUB03	-	Maua	-	-	-	Real	Cubic meter
Jet Paulinia Import Parity Price \$/bbl	BJPLU00	BJPLU03	-	Paulinia	-	-	-	US\$	Barrel
Jet Paulinia Import Parity Price BRL/CBM	BJPLB00	BJPLB03	-	Paulinia	-	-	-	Real	Cubic meter
Jet Sao Jose dos Campos Import Parity Price \$/bbl	BJSJA00	BJSJA03	-	Sao Jose dos Campos	-	-	-	US\$	Barrel
Jet Sao Jose dos Campos Import Parity Price BRL/CBM	BJSJB00	BJSJB03	-	Sao Jose dos Campos	-	-	-	Real	Cubic meter
Jet Araucaria Import Parity Price \$/bbl	BJAUA00	BJAUA03	-	Araucaria	-	-	-	US\$	Barrel
Jet Araucaria Import Parity Price BRL/CBM	BJAUB00	BJAUB03	-	Araucaria	-	-	-	Real	Cubic meter
Jet Canoas Import Parity Price \$/bbl	BJCNA00	BJCNA03	-	Canoas	-	-	-	US\$	Barrel
Jet Canoas Import Parity Price BRL/CBM	BJCNB00	BJCNB03	-	Canoas	-	-	-	Real	Cubic meter

* The assessed date range may move further forward when pipeline scheduling is affected by long holiday weekends

Jet fuel

Platts US jet fuel assessments reflect standard commercial Jet A specifications, as defined by ASTM International in its D1655 standard, unless otherwise stated. ASTM updates the D1655 standard periodically and Platts reflects the latest issue.

US Gulf Coast

Pipeline assessments

These reflect product moving on Colonial Pipeline with input at Pasadena, Texas. Shipments on Colonial Pipeline are scheduled according to cycles. There are typically six cycles per month, for a total of 72 cycles per year. For example, cycles 1, 2, 3, 4, 5, and 6 are for January, cycles 7, 8, 9, 10, 11, and 12 are for February, etc. Each scheduling cycle lasts an average of five days. Due to market conditions, cycles may carry premiums or discounts versus the next shipment. The cycle schedule is dictated by Colonial Pipeline, and is subject to change during the course of the year. The cycles among products differ. For example, the gasoline 13th cycle and distillate 13th cycle will not necessarily be in alignment.

Platts publishes outright price assessments as well as differentials to the relevant futures contracts for key products. The differentials are published versus the same futures contract month that forms the basis of the outright price assessments.

Platts USGC jet kerosene pipeline assessments reflect Colonial Pipeline specifications.

Jet kerosene 54: These assessments reflect Colonial Pipeline's aviation kerosene grade 54 specifications.

Jet kerosene 55: This assessment reflects Colonial Pipeline's aviation kerosene grade 55 specifications. Low sulfur jet kerosene is typically used as low sulfur blendstock to mix with diesel during fall and winter.

Ultra low sulfur jet kerosene (ULSK): This assessment reflects Colonial Pipeline's aviation kerosene grade 55 specifications, but with a maximum sulfur limit of 15 ppm. ULSK is typically used as low sulfur blendstock to mix with diesel during fall and winter, but also year-round for peak power generation units and some East Coast bus transportation systems.

Waterborne assessments

These reflect a minimum volume of 50,000 barrels and a maximum volume of 125,000 barrels, for loading 10 to 18 days forward from the date of publication. The barrels are expected to meet Colonial Pipeline's product specifications.

USGC waterborne assessments are basis Beaumont/Port Arthur, Lake Charles, and the greater Houston area, which includes Texas City, Deer Park, Pasadena and Houston. Other loading points, including Corpus Christi, New Orleans, Baton Rouge and Pascagoula, may be considered for assessments but this information may be normalized, back to the three main USGC loading areas.

This market is assessed on an FOB basis. The most open and representative bid will simply be for jet fuel at a generic USGC loading point. Bids that request individual loading points may be viewed as restrictive and may be subject to normalization.

In a USGC waterborne transaction, the seller nominates the port and terminal in the USGC area and informs the buyer within five days of the first day of the three-day laycan. The buyer then nominates the vessel and the loading dates within the three-day laycan, pending terminal acceptance.

Platts uses the prompt cycle pipeline assessment as the basis to determine its waterborne assessment for jet fuel. Applicable premiums or discounts for waterborne product will be added or subtracted from the primary pipeline assessment.

US Atlantic Coast

Platts assesses barrels coming off Colonial Pipeline's Line 3 running from Greensboro, North Carolina to Linden, New Jersey; barrels loading into the Buckeye Pipeline at Linden, New Jersey; and barges in New York Harbor.

Platts publishes outright price assessments for all products, as well as differentials to the relevant futures contracts for key products. The differentials are published versus the same futures contract month that forms the basis of the outright price assessments. Rollover dates on the US Atlantic Coast are the last trading day of the month.

Buckeye Pipeline assessments

These reflect jet fuel loading three to seven days forward from the date of publication Monday to Wednesday, and five to nine days forward on Thursday and Friday. The assessed date range may move further forward when pipeline scheduling is affected by long holiday weekends. Platts will announce these changes prior to implementation. Buckeye Pipeline assessments reflect a minimum volume of 25,000 barrels and a maximum volume of 75,000 barrels.

For bids and offers submitted during the Platts Market on Close assessment process on the Buckeye Pipeline, the seller must be willing to deliver on a batch provided by the buyer during the three-day laycan. For positions on a barge/Buckeye basis, the market maker must be willing to deliver either a barge or pipeline barrel at the counterparty's choice.

The assessments reflect Buckeye Pipeline's specifications.

Jet kerosene: These assessments reflect Buckeye Pipeline's aviation kerosene grade 182 specifications.

Low sulfur jet kerosene: These assessments reflect Buckeye Pipeline's aviation/kerosene grade 152 specifications.

Colonial Pipeline Linden assessment

Platts Colonial Pipeline Linden assessments are basis Linden and reflect Colonial Pipeline's aviation kerosene grade 54 specifications at the delivery point, which can be anywhere along Line 3.

Shipments on Colonial Pipeline are scheduled according to cycles. There are typically six cycles per month, for a total of 72 cycles per year. Platts assesses the first full Colonial cycle prior to arrival at the start of Line 3 in Greensboro, North Carolina. For example, if Cycle 1 aviation kerosene grade 54 is to start pumping at Greensboro on January 23, Platts would assess C1 until January 22 and then roll to C2 on January 23. If the Colonial Pipeline schedule were to change, Platts would adjust the cycle roll date in line with the schedule.

Barge assessments

Platts USAC jet fuel barge assessments reflect Colonial Pipeline specifications, with product for loading three to seven days forward from the date of publication. The Jet Kero barge assessment reflects a minimum volume of 25,000 barrels and a maximum volume of 100,000 barrels, while the Low Sulfur Jet Kero and Ultra Low Sulfur Jet Kero barge assessments reflect volumes of 25,000-75,000 barrels. For barge assessments with a volume range of 25,000-75,000 barrels, values in the 25,000-50,000 barrel range will take priority in the assessment.

Platts USAC barge assessments reflect market activity where the seller nominates a loading terminal three days ahead of the first day of a three-day laycan, including at least two full business days. Additionally, the buyer must nominate to the seller a barge and loading date two days prior to intended day of loading within the stipulated three-day laycan. This period should include at least one full business day. The nomination should be submitted prior to 10:30 am ET. The seller should give notice of clearance, pending terminal acceptance of the barge nomination within six hours of receipt of buyer's nomination.

Chicago

Pipeline assessments

These reflect product delivered in Chicago via pipeline, for a minimum volume of 10,000 barrels. Since July 2, 2018, the Chicago pipeline assessments have reflected the lowest value between the Badger, West Shore and Wolverine pipelines. Bids, offers or trades for locations other than Badger, West Shore and Wolverine may be included in the assessment process but will be normalized back to the same basis. This includes jet fuel at Des Plaines and East Chicago.

For both Chicago pipeline assessments, Platts has established cycle changes every 10 days, on the 5th, 15th and 25th of the month. The assessments reflect product moving on the prompt cycle.

Platts publishes outright price assessments for all products, as well as differentials to the relevant futures contracts for key products. The differentials are published versus the same futures contract month that forms the basis of the outright price assessments. In Chicago, rollover dates will align with Explorer Pipeline's cycle schedule.

Ultra low sulfur jet kerosene: Also known as No.1 oil. Sulfur of maximum 0.04%; gravity of 37-51 API. This assessment is published from approximately October 15 to April 1, depending on seasonal refinery production changes.

Group 3

Assessments reflect product moving on the Magellan Pipeline system on an FOB Tulsa, Oklahoma, basis. Assessments reflect market activity on the next business day from the date of publication, for trades with a minimum volume of 5,000 barrels.

Platts publishes outright price assessments for all products, as well as differentials to the relevant futures contracts for key products. The differentials are published versus the same

futures contract month that forms the basis of the outright price assessments. Rollover dates in Group 3 are the last trading day of the month.

Platts Group 3 jet fuel assessments reflect Magellan Pipeline specifications.

Jet kerosene: This assessment reflects Magellan Pipeline's specifications for Q grade commercial jet fuel.

Ultra low sulfur jet kerosene: This assessment reflects Magellan Pipeline's specifications for Y Grade No. 1 Diesel Fuel. This assessment is published from approximately October 15 through April 1, depending on seasonal refinery production changes.

US West Coast

Pipeline assessments

These reflect product moving on the Kinder Morgan Energy Partners Pipeline system in California; and on the Olympic Pipeline system in the Pacific Northwest. The assessments reflect a minimum volume of 25,000 barrels in Los Angeles; and a minimum-maximum volume range of 10,000-25,000 barrels in San Francisco and Seattle.

Los Angeles and San Francisco pipeline assessments

Platts assessments in California reflect Kinder Morgan's Pacific pipeline operations specifications for turbine fuel.

Shipments on the Kinder Morgan pipeline are scheduled according to cycles. There are typically four cycles every month for a total of 48 cycles per year. For example, cycles 1, 2, 3 and 4 are for January, cycles 5, 6, 7 and 8 are for February, etc. Each cycle lasts approximately 7.5 days, but changes in the schedule may occur. Platts assesses an "any-barrel," which can be scheduled for any cycle during the current month. Platts assessments roll from the current to the next forward month eight days prior to the end of the month.

Seattle pipeline assessment

The Seattle jet fuel assessment reflects Olympic Pipeline specifications for aviation turbine fuel J 94. It reflects prompt market activity, one to four days forward from the date of publication.

Shipments on the Olympic Pipeline system are also scheduled according to cycles. There are typically five cycles every month with the exception of February, which has four, for a total of 59 cycles per year. Each cycle lasts approximately six to seven days, but changes in the schedule may occur.

Waterborne assessment

The USWC waterborne assessment, basis CIF Los Angeles, reflects a minimum volume of 50,000 barrels of jet fuel, for delivery 14-21 days forward from the date of publication.

Caribbean

The Platts Caribbean jet fuel assessment reflects Jet A-1 specifications as defined by the UK Ministry of Defence in DEFSTAN 91-091. The UK Ministry of Defence updates DEFSTAN

91-091 periodically and Platts reflects the latest issue.

Platts defines the Caribbean as including any Caribbean islands. The Caribbean cargo value is assessed on an FOB basis. There is no central loading point for this assessment. It reflects cargoes of 200,000 to 300,000 barrels, for loading seven to 21 days forward from the date of publication.

In the absence of reported spot activity, the Caribbean assessment is based on a spread against the value of Platts US Gulf Coast jet fuel.

Latin America

Mexico jet fuel: Platts assesses delivered jet fuel prices into eastern and western Mexico. In eastern Mexico, Platts assesses jet fuel meeting the country's specifications on a CIF Tuxpan basis, for delivery seven to 21 days forward from the date of publication. In western Mexico, Platts assesses product meeting the country's specifications on a CIF Lazaro Cardenas and CIF Rosarito basis, for delivery 21-35 days forward. All assessments reflect 250,000-350,000 barrel shipments, and are published in

US dollar per barrel and the equivalent Mexico Pesos per liter value.

Delivered Brazil jet fuel: Platts assesses jet fuel meeting Brazil's specifications, in 250,000-350,000 barrel cargoes on a CFR basis to Itaqui, Suape, Aratu, Santos and Paranagua for delivery 15-30 days forward from the day of publication, with single port discharge. The assessments are published in \$/barrel and in Brazilian Real/cubic meter.

Brazil jet fuel IPP: Platts also publishes import parity prices for jet fuel meeting Brazil's specifications at the following locations: Manaus, Itaqui, Suape, Aratu, Santos, Paranagua, Tramandai, Guamare, Duque de Caxias, Betim, Cubatao, Maua, Paulinia, Sao Jose dos Campos, Araucaria, Canoas. The price represents the cost of jet fuel imported on the day of publication at each specified port. It includes the product value, freight, demurrage, insurance, losses, marine taxes, storage, trucking, multi-port discharge optionality and quality differences, where applicable. The prices are published in \$/barrel and in Brazilian Real/cubic meter.

HEATING OIL

Assessment	Code	Mavg	Contract basis	Location	Delivery period	Min size	Max size	Currency	UOM
US Gulf Coast									
Gasoil No. 2 USGC prompt pipeline	POAED00	POAED03	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Gasoil No. 2 USGC prompt pipeline vs NYMEX ULSD	ADIAA00	ADIAA03	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Gasoil No. 2 USGC pipeline Cycle 01	AAELW00	AAF7B00	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
Gasoil No. 2 USGC waterborne	POAEE00	POAEE03	FOB	Houston	10-18 days	50,000	125,000	US Cents	Gallon
ULS Heating Oil USGC prompt pipeline	AAXFD00	AAXFD03	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
ULS Heating Oil USGC prompt pipeline vs NYMEX ULSD	ADIAI00	ADIAI03	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
ULS Heating Oil USGC pipeline Cycle 01	AAXFJ00	AAXFJ03	FOB	Houston	Prompt Cycle	25,000	-	US Cents	Gallon
ULS Heating Oil USGC pipeline Cycle 02	AAXFK00	AAXFK03	FOB	Houston	Forward Cycle	25,000	-	US Cents	Gallon
ULS Heating Oil USGC pipeline Cycle 03	AAXFL00	AAXFL03	FOB	Houston	Forward Cycle	25,000	-	US Cents	Gallon
ULS Heating Oil USGC pipeline Cycle 04	AAXFM00	AAXFM03	FOB	Houston	Forward Cycle	25,000	-	US Cents	Gallon
ULS Heating Oil USGC pipeline Cycle 05	AAXFN00	AAXFN03	FOB	Houston	Forward Cycle	25,000	-	US Cents	Gallon
ULS Heating Oil USGC pipeline Cycle 06	AAXFP00	AAXFP03	FOB	Houston	Forward Cycle	25,000	-	US Cents	Gallon
Intraday Heating Oil USGC pipe	AAWZZ00	-	FOB	Houston	Prompt cycle	25,000	-	US Cents	Gallon
Intraday Heating Oil USGC pipe vs NYMEX ULSD	AAWZZ01	-	FOB	Houston	Prompt cycle	25,000	-	US Cents	Gallon
US Atlantic Coast									
ULS Heating Oil USAC Linden pipeline	AAXPU00	AAXPU03	FOB	NYH	First Full Cycle	25,000	-	US Cents	Gallon
Gasoil No. 2 New York Harbor barge	POAEG00	POAEG03	FOB	NYH	3-7 days	25,000	100,000	US Cents	Gallon
Gasoil No. 2 New York Harbor barge vs NYMEX ULSD	ADIAO00	ADIAO03	FOB	NYH	3-7 days	25,000	100,000	US Cents	Gallon
LS Heating Oil barge FOB NYH	AAXPY00	AAXPY03	FOB	NYH	3-7 days	25,000	100,000	US Cents	Gallon
LS Heating Oil barge FOB NYH vs NYMEX ULSD	ADIAP00	ADIAP03	FOB	NYH	3-7 days	25,000	100,000	US Cents	Gallon
ULS Heating Oil barge FOB NYH	AAXPX00	AAXPX03	FOB	NYH	3-7 days	25,000	100,000	US Cents	Gallon
ULS Heating Oil barge FOB NYH vs NYMEX ULSD	ADIAQ00	ADIAQ03	FOB	NYH	3-7 days	25,000	100,000	US Cents	Gallon
Intraday Heating Oil NYH barge	AAWZY00	-	FOB	NYH	3-7 days	25,000	100,000	US Cents	Gallon
Intraday Heating Oil NYH barge vs NYMEX ULSD	AAWZY01	-	FOB	NYH	3-7 days	25,000	100,000	US Cents	Gallon

Heating oil**US Gulf Coast****Pipeline assessments**

These reflect product moving on Colonial Pipeline with input at Pasadena, Texas. Shipments on Colonial Pipeline are scheduled according to cycles. There are typically six cycles per month, for a total of 72 cycles per year. For example, cycles 1, 2, 3, 4, 5, and

6 are for January, cycles 7, 8, 9, 10, 11, and 12 are for February, etc. Each scheduling cycle lasts an average of five days. Due to market conditions, cycles may carry premiums or discounts versus the next shipment. The cycle schedule is dictated by Colonial Pipeline, and is subject to change during the course of the year. The cycles among products differ. For example, the gasoline 13th cycle and distillate 13th cycle will not necessarily be in alignment.

Platts publishes outright price assessments for all products, as well as differentials to the relevant futures contracts for key products. The differentials are published versus the same futures contract month that forms the basis of the outright price assessments.

Platts USGC heating oil pipeline assessments reflect Colonial Pipeline specifications.

Gasoil No. 2 (Heating oil): These assessments reflect Colonial Pipeline's specifications for high sulfur undyed heating oil grade 77.

Ultra low sulfur heating oil (ULSHO): These assessments reflect Colonial Pipeline's specifications for 15 ppm sulfur heating oil grade 67.

Waterborne assessment

This reflects a minimum volume of 50,000 barrels and a maximum volume of 125,000 barrels, for loading 10 to 18 days forward from the date of publication. The barrels are expected to meet Colonial Pipeline's 77-grade heating oil specifications, but with a minimum cetane number of 42.

USGC waterborne assessments are basis Beaumont/Port Arthur, Lake Charles and the greater Houston area which includes Texas City, Deer Park, Pasadena and Houston. Other loading points, including Corpus Christi, New Orleans, Baton Rouge and Pascagoula, may be considered for assessments but this information may be normalized back to the three main USGC loading areas.

This market is assessed on an FOB basis. The most open and representative bid will simply be for heating oil at a generic USGC loading point. Bids that request individual loading points may be viewed as restrictive and may be subject to normalization.

In a USGC waterborne transaction, the seller nominates the port and terminal in the USGC area and informs the buyer within five days of the first day of the three-day laycan. The buyer then

nominates the vessel and the loading dates within the three-day laycan, pending terminal acceptance.

Platts uses the prompt cycle pipeline assessment as the basis to determine its waterborne assessment for heating oil. Applicable premiums or discounts for waterborne product will be added or subtracted from the primary pipeline assessment.

US Atlantic Coast

Platts assesses barrels coming off Colonial Pipeline's Line 3 running from Greensboro, North Carolina to Linden, New Jersey; and barges in New York Harbor.

Platts publishes outright price assessments for all products, as well as differentials to the relevant futures contracts for key products. The differentials are published versus the same futures contract month that forms the basis of the outright price assessments. Rollover dates on the US Atlantic Coast are the last trading day of the month.

Colonial Pipeline Linden assessment

Platts Colonial Pipeline Linden assessments are basis Linden and reflect Colonial Pipeline's specifications for 15 ppm sulfur heating oil grade 67 at the point of delivery, which can be anywhere along Line 3.

Colonial Pipeline shipments are scheduled according to cycles. There are typically six cycles per month, for a total of 72 cycles per year. Platts assesses the firstfull Colonial cycle prior to the arrival at the start of Line 3 in Greensboro, North Carolina. For example, if Cycle 1 67 grade ULSHO is to start pumping at

Greensboro on January 23, Platts would assess C1 until January 22 and then roll to C2 on January 23. If the Colonial Pipeline schedule were to change, Platts would adjust the cycle roll date in line with the schedule.

Barge assessments

These reflect a minimum volume of 25,000 barrels and a maximum volume of 100,000 barrels, for loading three to seven days forward from the date of publication.

Platts USAC barge assessments reflect market activity where the seller nominates a loading terminal three days ahead of the first day of a three-day laycan, including at least two full business days. Additionally, the buyer must nominate to the seller a barge and loading date two days prior to intended day of loading within the stipulated three-day laycan. This period should include at least one full business day. The nomination should be submitted prior to 10:30 am ET. The seller should give notice of clearance, pending terminal acceptance of the barge nomination within six hours of receipt of buyer's nomination.

Gasoil No. 2: This assessment reflects Colonial Pipeline's specifications for high sulfur undyed heating oil grade 77 at the point of delivery, but with a minimum cetane number of 40.

Low sulfur heating oil (LSHO): This assessment reflects Colonial Pipeline's specifications for 500 ppm sulfur heating oil grade 75 at the point of delivery.

Ultra low sulfur heating oil: This assessment reflects Colonial Pipeline's specifications for 15 ppm sulfur heating oil grade 67 at the point of delivery.

DIESEL

Assessment	Code	Mavg	Contract basis	Location	Delivery period	Min size	Max size	Typical size	Currency	UOM
US Gulf Coast										
ULSD USGC prompt pipeline	AATGY00	AATGY03	FOB	Houston	Prompt Cycle	25,000	-	-	US Cents	Gallon
ULSD USGC prompt pipeline vs NYMEX ULSD	ADIQA00	ADIQA03	FOB	Houston	Prompt Cycle	25,000	-	-	US Cents	Gallon
ULSD USGC pipeline Cycle 01	AAUJV00	AAUJV03	FOB	Houston	Prompt Cycle	25,000	-	-	US Cents	Gallon
ULSD USGC pipeline Cycle 02	AAUJW00	AAUJW03	FOB	Houston	Forward Cycle	25,000	-	-	US Cents	Gallon
ULSD USGC pipeline Cycle 03	AAUJX00	AAUJX03	FOB	Houston	Forward Cycle	25,000	-	-	US Cents	Gallon
ULSD USGC pipeline Cycle 04	AAUJY00	AAUJY03	FOB	Houston	Forward Cycle	25,000	-	-	US Cents	Gallon
ULSD USGC pipeline Cycle 05	AAUJZ00	AAUJZ03	FOB	Houston	Forward Cycle	25,000	-	-	US Cents	Gallon
ULSD USGC pipeline Cycle 06	AAUKD00	AAUKD03	FOB	Houston	Forward Cycle	25,000	-	-	US Cents	Gallon
ULSD USGC pipeline ratable Mo01	AASAR00	-	FOB	Houston	One month forward	25,000	-	-	US Cents	Gallon
ULSD USGC waterborne	AATGZ00	AATGZ03	FOB	Houston	10-18 days	50,000	125,000	-	US Cents	Gallon
Export ULSD	AAXRV00	AAXRV03	FOB	Houston	7-21 days	-	-	300,000	US Cents	Gallon
Export ULSD \$/mt	AAXRW00	AAXRW03	FOB	Houston	7-21 days	-	-	300,000	US\$	MT
Colonial line space Line 2 (distillates)	AAXTD00	AAXTD03	FOB/CIF	Colonial Pipeline	Prompt cycle	25,000	-	-	US Cents	Gallon
Colonial line space Line 2 and Line 3 (distillates)	AAXTG00	AAXTG03	FOB/CIF	Colonial Pipeline	Prompt cycle	25,000	-	-	US Cents	Gallon
Colonial line space Line 3 (distillates)	AAXTF00	AAXTF03	FOB/CIF	Colonial Pipeline	Prompt cycle	25,000	-	-	US Cents	Gallon
Intraday ULSD USGC pipe	AAXAW00	-	FOB	Houston	Prompt cycle	25,000	-	-	US Cents	Gallon
Intraday ULSD USGC pipe vs NYMEX ULSD	AAXAW01	-	FOB	Houston	Prompt cycle	25,000	-	-	US Cents	Gallon
US Atlantic Coast										
ULSD New Jersey Buckeye Pipeline	AATHF00	AATHF03	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	-	US Cents	Gallon
ULSD New Jersey Buckeye Pipeline vs NYMEX ULSD	ADIYA00	ADIYA03	FOB	NYH	*3-7 days M-W, 5-9 days Th-F	25,000	75,000	-	US Cents	Gallon
ULSD USAC Linden Pipeline prompt cycle	AAXPW00	AAXPW03	FOB	NYH	First Full Cycle	25,000	-	-	US Cents	Gallon
ULSD USAC Linden Pipeline prompt cycle vs NYMEX ULSD	ADLAA00	ADLAA03	FOB	NYH	First Full Cycle	25,000	-	-	US Cents	Gallon
ULSD New York Harbor barge	AATGX00	AATGX03	FOB	NYH	3-7 days	25,000	100,000	-	US Cents	Gallon
ULSD New York Harbor barge vs NYMEX ULSD	ADIZA00	ADIZA03	FOB	NYH	3-7 days	25,000	100,000	-	US Cents	Gallon
Intraday ULSD NYH barge	AAWJU00	-	FOB	NYH	3-7 days	25,000	100,000	-	US Cents	Gallon
Intraday ULSD NYH barge vs NYMEX ULSD	AAWJU01	-	FOB	NYH	3-7 days	25,000	100,000	-	US Cents	Gallon
Midwest										
ULSD Chicago pipeline	AATHA00	AATHA03	FOB	Chicago	Prompt cycle	10,000	-	-	US Cents	Gallon
ULSD Chicago pipeline vs NYMEX ULSD	ADLAI00	ADLAI03	FOB	Chicago	Prompt cycle	10,000	-	-	US Cents	Gallon
ULSD Chicago BCX	ACBAE00	ACBAE03	In-tank	Chicago BCX	Prompt cycle	10,000	-	-	US Cents	Gallon
ULSD Chicago BCX vs NYMEX ULSD	ACBAF00	ACBAF03	In-tank	Chicago BCX	Prompt cycle	10,000	-	-	US Cents	Gallon
ULSD Group 3 pipeline	AATHB00	AATHB03	FOB	Tulsa, OK	1-3 days forward	10,000	-	-	US Cents	Gallon
ULSD Group 3 pipeline vs NYMEX ULSD	ADLAB00	ADLAB03	FOB	Tulsa, OK	1-3 days forward	10,000	-	-	US Cents	Gallon
Intraday ULSD Chicago	AAVTC00	-	FOB	Chicago	Prompt cycle	10,000	-	-	US Cents	Gallon
Intraday ULSD Chicago vs NYMEX ULSD	AAVTC01	-	FOB	Chicago	Prompt cycle	10,000	-	-	US Cents	Gallon
Intraday ULSD Group 3	AAVTE00	-	FOB	Tulsa, OK	1-3 days forward	10,000	-	-	US Cents	Gallon
Intraday ULSD Group 3 vs NYMEX ULSD	AAVTE01	-	FOB	Tulsa, OK	1-3 days forward	10,000	-	-	US Cents	Gallon
US West Coast										
ULSD (EPA) Los Angeles pipeline	POAET00	POAET03	FOB	Los Angeles	Any pipeline cycle	10,000	25,000	-	US Cents	Gallon
ULSD (EPA) Los Angeles pipeline vs NYMEX ULSD	AANVZ00	AANVZ03	FOB	Los Angeles	Any pipeline cycle	10,000	25,000	-	US Cents	Gallon
ULSD No2 CARB Diesel Los Angeles pipeline	POAAK00	POAAK03	FOB	Los Angeles	Any pipeline cycle	25,000	25,000	-	US Cents	Gallon

DIESEL

Assessment	Code	Mavg	Contract basis	Location	Delivery period	Min size	Max size	Typical size	Currency	UOM
ULSD No2 CARB Diesel Los Angeles pipeline vs NYMEX ULSD	AANWA00	AANWA03	FOB	Los Angeles	Any pipeline cycle	25,000	25,000	-	US Cents	Gallon
ULSD (EPA) San Francisco pipeline	POAEY00	POAEY03	FOB	San Francisco	Any pipeline cycle	10,000	25,000	-	US Cents	Gallon
ULSD No2 CARB Diesel San Francisco pipeline	POAAL00	POAAL03	FOB	San Francisco	Any pipeline cycle	10,000	25,000	-	US Cents	Gallon
ULSD (EPA) Portland pipeline	AAUEY00	AAUEY03	FOB	Portland	Any pipeline cycle	10,000	25,000	-	US Cents	Gallon
ULSD (EPA) Seattle pipeline	AAUEX00	AAUEX03	FOB	Seattle	Any pipeline cycle	10,000	25,000	-	US Cents	Gallon
Intraday CARB Diesel Los Angeles	AAVSC00	-	FOB	Los Angeles	Any pipeline cycle	25,000	25,000	-	US Cents	Gallon
Intraday CARB Diesel Los Angeles vs NYMEX ULSD	AAVSCDF	-	FOB	Los Angeles	Any pipeline cycle	25,000	25,000	-	US Cents	Gallon
Latin America										
Argentina ULSD	AAXWZ00	AAXWZ03	CIF	La Plata	15-30 days forward	250,000	300,000	-	US\$	Barrel
Ecuador ULSD	AAXWF00	AAXWF03	CIF	Esmeraldas	15-30 days forward	200,000	300,000	-	US\$	Barrel
Peru ULSD	AAXWY00	AAXWY03	CIF	Peru	15-30 days forward	250,000	350,000	-	US\$	Barrel
ULSD CIF Eastern Mexico (\$/barrel)	AAXWE00	AAXWE03	CIF	Tuxpan	7-21 days forward	250,000	350,000	-	US\$	Barrel
ULSD CIF Eastern Mexico (Pesos/liter)	AATFI00	AATFI03	CIF	Tuxpan	7-21 days forward	250,000	350,000	-	Mexico Pesos	Liter
ULSD CIF Lazaro Cardenas (\$/barrel)	AATFE00	AATFE03	CIF	Rosarito	21-35 days forward	250,000	350,000	-	US\$	Barrel
ULSD CIF Lazaro Cardenas (Pesos/liter)	AATF000	AATF003	CIF	Rosarito	21-35 days forward	250,000	350,000	-	Mexico Pesos	Liter
ULSD CIF Rosarito (\$/barrel)	AATFB00	AATFB03	CIF	Lazaro Cardenas	21-35 days forward	250,000	350,000	-	US\$	Barrel
ULSD CIF Rosarito (Pesos/liter)	AATFL00	AATFL03	CIF	Lazaro Cardenas	21-35 days forward	250,000	350,000	-	Mexico Pesos	Liter
ULSD S10 Itaqui (\$/barrel)	BUITA00	BUITA03	CFR	Itaqui	15-30 days forward	250,000	350,000	-	US\$	Barrel
ULSD S10 Itaqui (Real/c um)	BUITB00	BUITB03	CFR	Itaqui	15-30 days forward	250,000	350,000	-	Real	C um
ULSD S10 Suape (\$/barrel)	BUSUA00	BUSUA03	CFR	Suape	15-30 days forward	250,000	350,000	-	US\$	Barrel
ULSD S10 Suape (Real/c um)	BUSUB00	BUSUB03	CFR	Suape	15-30 days forward	250,000	350,000	-	Real	C um
ULSD S10 Aratu (\$/barrel)	BUARA00	BUARA03	CFR	Aratu	15-30 days forward	250,000	350,000	-	US\$	Barrel
ULSD S10 Aratu (Real/c um)	BUARB00	BUARB03	CFR	Aratu	15-30 days forward	250,000	350,000	-	Real	C um
ULSD S10 Santos (\$/barrel)	BUSAA00	BUSAA03	CFR	Santos	15-30 days forward	250,000	350,000	-	US\$	Barrel
ULSD S10 Santos (Real/c um)	BUSAB00	BUSAB03	CFR	Santos	15-30 days forward	250,000	350,000	-	Real	C um
ULSD S10 Paranagua (\$/barrel)	BUPAA00	BUPAA03	CFR	Paranagua	15-30 days forward	250,000	350,000	-	US\$	Barrel
ULSD S10 Paranagua (Real/c um)	BUPAB00	BUPAB03	CFR	Paranagua	15-30 days forward	250,000	350,000	-	Real	C um
ULSD Manaus Import Parity Price \$/bbl	BUMAA00	BUMAA03	-	Manaus	-	-	-	-	US\$	Barrel
ULSD Manaus Import Parity Price BRL/CBM	BUMAB00	BUMAB03	-	Manaus	-	-	-	-	Real	C um
ULSD IPP Itaqui (\$/barrel)	BUITD00	BUITD03	-	Itaqui	-	-	-	-	US\$	Barrel
ULSD IPP Itaqui (Real/c um)	BUI TE00	BUI TE03	-	Itaqui	-	-	-	-	Real	C um
ULSD IPP Suape (\$/barrel)	BUSUD00	BUSUD03	-	Suape	-	-	-	-	US\$	Barrel
ULSD IPP Suape (Real/c um)	BUSUE00	BUSUE03	-	Suape	-	-	-	-	Real	C um
ULSD IPP Aratu (\$/barrel)	BUARD00	BUARD03	-	Aratu	-	-	-	-	US\$	Barrel
ULSD IPP Aratu (Real/c um)	BUARE00	BUARE03	-	Aratu	-	-	-	-	Real	C um
ULSD IPP Santos (\$/barrel)	BUSAD00	BUSAD03	-	Santos	-	-	-	-	US\$	Barrel
ULSD IPP Santos (Real/c um)	BUSAE00	BUSAE03	-	Santos	-	-	-	-	Real	C um
ULSD IPP Paranagua (\$/barrel)	BUPAD00	BUPAD03	-	Paranagua	-	-	-	-	US\$	Barrel
ULSD IPP Paranagua (Real/c um)	BUPAE00	BUPAE03	-	Paranagua	-	-	-	-	Real	C um
ULSD Tramandai Import Parity Price \$/bbl	BUTRA00	BUTRA03	-	Tramandai	-	-	-	-	US\$	Barrel
ULSD Tramandai Import Parity Price BRL/CBM	BUTRB00	BUTRB03	-	Tramandai	-	-	-	-	Real	C um
ULSD Guamare Import Parity Price \$/bbl	BUGUA00	BUGUA03	-	Guamare	-	-	-	-	US\$	Barrel
ULSD Guamare Import Parity Price BRL/CBM	BUGUB00	BUGUB03	-	Guamare	-	-	-	-	Real	C um

DIESEL

Assessment	Code	Mavg	Contract basis	Location	Delivery period	Min size	Max size	Typical size	Currency	UOM
ULSD Duque de Caxias Import Parity Price \$/bbl	BUDEA00	BUDEA03	-	Duque de Caxias	-	-	-	-	US\$	Barrel
ULSD Duque de Caxias Import Parity Price BRL/CBM	BUDEB00	BUDEB03	-	Duque de Caxias	-	-	-	-	Real	C um
ULSD Betim Import Parity Price \$/bbl	BUBTA00	BUBTA03	-	Betim	-	-	-	-	US\$	Barrel
ULSD Betim Import Parity Price BRL/CBM	BUBTB00	BUBTB03	-	Betim	-	-	-	-	Real	C um
ULSD Cubatao Import Parity Price \$/bbl	BUCUA00	BUCUA03	-	Cubatao	-	-	-	-	US\$	Barrel
ULSD Cubatao Import Parity Price BRL/CBM	BUCUB00	BUCUB03	-	Cubatao	-	-	-	-	Real	C um
ULSD Maua Import Parity Price \$/bbl	BUMUA00	BUMUA03	-	Maua	-	-	-	-	US\$	Barrel
ULSD Maua Import Parity Price BRL/CBM	BUMUB00	BUMUB03	-	Maua	-	-	-	-	Real	C um
ULSD Paulinia Import Parity Price \$/bbl	BUPLU00	BUPLU03	-	Paulinia	-	-	-	-	US\$	Barrel
ULSD Paulinia Import Parity Price BRL/CBM	BUPLB00	BUPLB03	-	Paulinia	-	-	-	-	Real	C um
ULSD Sao Jose dos Campos Import Parity Price \$/bbl	BUSJA00	BUSJA03	-	Sao Jose dos Campos	-	-	-	-	US\$	Barrel
ULSD Sao Jose dos Campos Import Parity Price BRL/CBM	BUSJB00	BUSJB03	-	Sao Jose dos Campos	-	-	-	-	Real	C um
ULSD Araucaria Import Parity Price \$/bbl	BUAUA00	BUAUA03	-	Araucaria	-	-	-	-	US\$	Barrel
ULSD Araucaria Import Parity Price BRL/CBM	BUAUB00	BUAUB03	-	Araucaria	-	-	-	-	Real	C um
ULSD Canoas Import Parity Price \$/bbl	BUCNA00	BUCNA03	-	Canoas	-	-	-	-	US\$	Barrel
ULSD Canoas Import Parity Price BRL/CBM	BUCNB00	BUCNB03	-	Canoas	-	-	-	-	Real	C um

* The assessed date range may move further forward when pipeline scheduling is affected by long holiday weekends

Diesel**US Gulf Coast****Pipeline assessments**

These reflect product moving on Colonial Pipeline with input at Pasadena, Texas. The assessments reflect Colonial Pipeline's specifications for 15 ppm sulfur diesel fuel grade 62.

Shipments on Colonial Pipeline are scheduled according to cycles. There are typically six cycles per month, for a total of 72 cycles per year. For example, cycles 1, 2, 3, 4, 5, and 6 are for January, cycles 7, 8, 9, 10, 11, and 12 are for February, etc. Each scheduling cycle lasts an average of five days. Due to market conditions, cycles may carry premiums or discounts versus the next shipment. The cycle schedule is dictated by Colonial Pipeline, and is subject to change during the course of the year. The cycles among products differ. For example, the gasoline 13th cycle and distillate 13th cycle will not necessarily be in alignment.

Platts publishes outright price assessments for all products,

as well as differentials to the relevant futures contracts for key products. The differentials are published versus the same futures contract month that forms the basis of the outright price assessments.

Platts also publishes a ratable assessment for ULSD for the first full month forward from the date of publication. A ratable contract stipulates that a seller will supply 25,000 barrels of ULSD per Colonial Pipeline cycle throughout the contractual month. Platts rolls over the month being assessed to the following month after the first cycle of the month schedules.

Waterborne assessment

This reflects a minimum volume of 50,000 barrels and a maximum volume of 125,000 barrels, for loading 10 to 18 days forward from the date of publication. The barrels are expected to meet Colonial Pipeline's specifications for 15 ppm sulfur diesel fuel grade 62.

USGC waterborne assessments are basis Beaumont/Port Arthur, Lake Charles and the greater Houston area, which includes

Texas City, Deer Park, Pasadena and Houston. Other loading points, including Corpus Christi, New Orleans, Baton Rouge and Pascagoula, may be considered for assessments but this information may be normalized back to the three main USGC loading areas.

This market is assessed on an FOB basis. The most open and representative bid will simply be for ULSD at a generic USGC loading point. Bids that request individual loading points may be viewed as restrictive and may be subject to normalization.

In a USGC waterborne transaction, the seller nominates the port and terminal in the USGC area and informs the buyer within five days of the first day of the three-day laycan. The buyer then nominates the vessel and the loading dates within the three-day laycan, pending terminal acceptance.

Platts uses the prompt cycle pipeline assessment as the basis to determine its waterborne assessment for ULSD. Applicable premiums or discounts for waterborne product will be added or subtracted from the primary pipeline assessment.

Export ULSD: This reflects French Winter specifications of EN590 quality diesel with a typical standard clip size of 300,000 barrels and a typical operational tolerance of plus/minus 10%. The Export ULSD assessment does not include the value of RINs. The assessment reflects cargoes loading seven to 21 days forward from the date of publication, subject to industry standard terminal and vessel nomination procedures. Export ULSD should be free of any biofuels. Loading locations include terminals along the US Gulf Coast from Corpus Christi, Texas, to Pascagoula, Mississippi, normalized to an FOB Houston basis. Export ULSD is assessed by calculating a forward Strip for pipeline diesel that aligns with the 7-21 day Export ULSD loading window, and adding or subtracting any applicable premium or discount. Export ULSD is published as an outright value in both US cents per gallon and US dollars per metric ton.

Colonial Line Space

Platts assesses the value of line space for distillates and gasoline on three major Colonial Pipeline segments between Pasadena, Texas, and Linden, New Jersey. They reflect the premium or discount paid during the exchange of product at two locations along Colonial's Line 1 and/or Line 3, as well as Line 2 and/or Line 3. The assessments are linked with cycle numbers on the Colonial Pipeline schedule. The assessments reflect the transfer of a minimum of 25,000 barrels of distillates or gasoline, and are not limited to any specific product. The buyer of the line space determines which product is shipped.

US Atlantic Coast

Platts assesses barrels coming off Colonial Pipeline's Line 3 running from Greensboro, North Carolina to Linden, New Jersey; barrels loading into the Buckeye Pipeline at Linden, New Jersey; and barges in New York Harbor.

Platts publishes outright price assessments for all products, as well as differentials to the relevant futures contracts for key products. The differentials are published versus the same

futures contract month that forms the basis of the outright price assessments. Rollover dates on the US Atlantic Coast are the last trading day of the month.

Buckeye Pipeline assessment

This reflects ULSD loading three to seven days forward from the date of publication Monday to Wednesday, and five to nine days forward on Thursday and Friday. The assessed date range may move further forward when pipeline scheduling is affected by long holiday weekends. Platts will announce these changes prior to implementation.

The Buckeye pipeline assessment reflects a minimum volume of 25,000 barrels and a maximum volume of 75,000 barrels. The assessment reflects Buckeye Pipeline's specifications for ultra low sulfur diesel grade 190.

For bids and offers submitted during the Platts Market on Close assessment process for the Buckeye Pipeline, the seller must be willing to deliver on a batch provided by the buyer during the three-day laycan. For positions on a barge/Buckeye basis, the market maker must be willing to deliver either a barge or pipeline barrel at the counterparty's choice.

Colonial Pipeline Linden assessment

Platts Colonial Pipeline Linden assessments are basis Linden and reflect Colonial Pipeline's specifications for 15 ppm sulfur diesel grade 62 at the delivery point, which can be anywhere along Line 3.

Shipments on Colonial Pipeline are scheduled according to cycles. There are typically six cycles per month, for a total of 72 cycles per year. Platts assesses the first full Colonial cycle prior to arrival at the start of Line 3 at Greensboro, North Carolina. For example, if Cycle 1 diesel is to start pumping at Greensboro on January 23, Platts would assess C1 until January 22 and then roll to C2 on January 23. If the Colonial Pipeline schedule were to change, Platts would adjust the cycle roll date in line with the schedule.

Barge assessment

This reflects Colonial Pipeline's specifications for 15 ppm sulfur diesel fuel grade 62. The assessment **reflects shipments** with a minimum volume of 25,000 barrels and a maximum volume of 100,000 barrels, for loading three to seven days forward from the date of publication.

Platts USAC barge assessments reflect market activity where the seller nominates a loading terminal three days ahead of the first day of a three-day laycan, including at least two full business days. Additionally, the buyer must nominate to the seller a barge and loading date two days prior to intended day of loading within the stipulated three-day laycan. This period should include at least one full business day. The nomination should be submitted prior to 10:30 am ET. The seller should give notice of clearance, pending terminal acceptance of the barge nomination within six hours of receipt of buyer's nomination.

Chicago

Pipeline assessments

These reflect product delivered in Chicago via pipeline, for a minimum volume of 10,000 barrels. Since July 2, 2018, the Chicago pipeline assessments have reflected the lowest value between the Badger, West Shore and Wolverine pipelines. Bids, offers or trades for locations other than Badger, West Shore and Wolverine may be included in the assessment process but will be normalized back to the same basis.

BCX assessments

These reflect product at the Buckeye Complex storage hub in the Chicago area, for a minimum volume of 10,000 barrels. Bids, offers and trades for other pipelines or terminals may be normalized back to the BCX basis for assessment purposes.

For both Chicago pipeline and BCX assessments, Platts has established cycle changes every 10 days, on the 5th, 15th, and 25th of the month. The assessments reflect product moving on the prompt cycle.

Platts publishes outright price assessments for all products, as well as differentials to the relevant futures contracts for key products. The differentials are published versus the same futures contract month that forms the basis of the outright price assessments. In Chicago, rollover dates will align with Explorer Pipeline's cycle schedule.

Group 3

The Group 3 ULSD assessment reflects product moving on the Magellan Pipeline system on an FOB Tulsa, Oklahoma, basis. It reflects Magellan Pipeline's specifications for X-grade ultra low sulfur diesel.

The assessment reflects market activity on the next business day from the date of publication, for trades with a minimum volume of 10,000 barrels.

Platts publishes outright price assessments for all products, as well as differentials to the relevant futures contracts for key products. The differentials are published versus the same futures contract month that forms the basis of the outright price assessments. Rollover dates in Group 3 are the last trading day of the month.

US West Coast

Pipeline assessments

These reflect product moving on the Kinder Morgan Energy Partners Pipeline system in California; and on the Olympic Pipeline system in the Pacific Northwest. The assessments reflect a minimum volume of 25,000 barrels for LA CARB Diesel and a minimum-maximum volume of 10,000-25,000 barrels for all other grades.

Los Angeles and San Francisco pipeline assessments

Shipments on the Kinder Morgan pipeline are scheduled according to cycles. There are typically four cycles every month for a total of 48 cycles per year. For example, cycles 1, 2, 3 and 4 are for January, cycles 5, 6, 7 and 8 are for February, etc. Each

cycle lasts approximately 7.5 days, but changes in the schedule may occur. Platts assesses an "any-barrel," which can be scheduled for any cycle during the current month.

Platts assessments in California reflect specifications for Kinder Morgan's Pacific pipeline operations.

CARB Diesel: These assessments reflect the value of fuel for delivery on the Kinder Morgan Pipeline System, with an option to deliver into GATX storage in Los Angeles. The assessments reflect fuel that meets the standards of the California Air Resources Board. It also reflects Kinder Morgan's Pacific pipeline specifications for CARB ultra low sulfur diesel fuel (may contain up to 5% renewable diesel content).

ULSD (EPA): These assessments reflect the value of fuel that meets EPA ultra low sulfur diesel specifications, but not the California Air Resources Board specifications. The assessment also reflects Kinder Morgan's Pacific pipeline specifications for EPA ultra low sulfur diesel fuel (may contain up to 5% renewable diesel content).

Portland and Seattle pipeline assessments

These reflect the value of fuel that meets EPA ultra low sulfur diesel specifications, but not the California Air Resources Board specifications. These assessments also reflect Olympic Pipeline specifications for ultra low sulfur diesel fuel #2.

Shipments on the Olympic Pipeline system are also scheduled according to cycles. There are typically five cycles every month with the exception of February, which has four, for a total of 59 cycles per year. Each cycle lasts approximately six to seven days, but changes in the schedule may occur. Portland and Seattle product assessments reflect prompt market activity, one to four days forward from the date of publication.

Latin America

Argentina ULSD: Platts assesses ULSD meeting YPF's specification on a CIF La Plata basis, for delivery 15-30 days

forward in parcels of 250,000-350,000 barrels.

Ecuador ULSD: Platts assesses ULSD on a CIF Esmeraldas basis, meeting Petroecuador's specifications, for delivery 15-30 days forward in parcels of 200,000-300,000 barrels.

Mexico ULSD: Platts assesses delivered ULSD prices into eastern and western Mexico. In eastern Mexico, Platts assesses ULSD meeting the country's specifications, on a CIF Tuxpan basis, for delivery seven to 21 days forward from the date of publication. In western Mexico, Platts assesses product meeting the country's specifications, on a CIF Lazaro Cardenas and CIF Rosarito basis, for delivery 21-35 days forward. All assessments reflect 250,000-350,000 barrel shipments, and are published in US dollars per barrel and the equivalent Mexico Pesos per liter value.

Peru ULSD: Platts assesses ULSD on a CIF Peru basis meeting Petroperu's specifications, for delivery 15-30 days forward in parcels of 250,000-350,000 barrels.

Delivered Brazil ULSD: Platts assesses ULSD meeting Brazil's specifications in 250,000-350,000 barrel cargoes on a CFR basis to Itaquí, Suape, Aratu, Santos and Paranaguá for delivery 15-30 days forward from the day of assessment, with single port discharge. The assessments are published in \$/barrel and in Brazilian Real/cubic meter.

Brazil ULSD IPP: Platts also publishes import parity prices for ULSD meeting Brazil's specifications at the following locations: Manaus, Itaquí, Suape, Aratu, Santos, Paranaguá, Tramandai, Guamaré, Duque de Caxias, Betim, Cubatao, Maua, Paulínia, São José dos Campos, Araucaria, Canoas. The price represents the cost of ULSD imported on the day of publication at each specified port. It includes the product value, freight, demurrage, insurance, losses, marine taxes, storage, trucking, multi-port discharge optionality and quality differences, where applicable. The prices are published in \$/barrel and in Brazilian Real/cubic meter.

FUEL OIL

Assessment	Code	Mavg	Contract basis	Location	Delivery period	Min size	Max size	Currency	UOM
US Gulf Coast									
FO No.6 1.0% S USGC waterborne	PAAAI00	PAAAI03	FOB	Houston	7-15 days forward	45,000	-	US\$	Barrel
FO No.6 1.0% S USGC waterborne vs USGC HSFO strip	AAUGT00	AAUGT03	FOB	Houston	7-15 days forward	45,000	-	US\$	Barrel
FO No.6 Slurry Oil USGC waterborne	PPAPW00	PPAPW03	FOB	Houston	7-15 days forward	25,000	-	US\$	Barrel
FO No.6 Slurry Oil USGC waterborne vs USGC HSFO strip	AAUGS00	AAUGS03	FOB	Houston	7-15 days forward	25,000	-	US\$	Barrel
FO RMG 380 USGC waterborne	PUBDM00	PUBFI03	FOB	Houston	7-15 days forward	45,000	-	US\$	Barrel
FO RMG 380 USGC waterborne vs USGC HSFO strip	AAUGV00	AAUGV03	FOB	Houston	7-15 days forward	45,000	-	US\$	Barrel
USGC HSFO	PUAFZ00	PUAFZ03	FOB	Houston	7-15 days forward	45,000	-	US\$	Barrel
USGC HSFO strip	AAUGW00	AAUGW03	FOB	Houston	7-15 days forward	45,000	-	US\$	Barrel
USGC HSFO vs USGC HSFO strip	AAUGU00	AAUGU03	FOB	Houston	7-15 days forward	45,000	-	US\$	Barrel
USGC Marine Fuel 0.5%	AUGMA00	AUGMA03	FOB	Houston	7-15 days forward	45,000	-	US\$	Barrel
USGC Marine Fuel 0.5%	AUGMB00	AUGMB03	FOB	Houston	7-15 days forward	7,000	-	US\$	MT
US Atlantic Coast									
FO No.6 0.3% HP New York Harbor delivered cargo	PAAAE00	PAAAE03	CIF	New York	10-25 days forward	50,000	-	US\$	Barrel
FO No.6 0.3% HP New York Harbor delivered cargo vs FO 1% NYH strip	AAUGA00	AAUGA03	CIF	New York	10-25 days forward	50,000	-	US\$	Barrel
FO No.6 0.3% LP New York Harbor delivered cargo	PUAAB00	PUAAB03	CIF	New York	10-25 days forward	50,000	-	US\$	Barrel
FO No.6 0.3% LP New York Harbor delivered cargo vs FO 1% NYH strip	AAUGB00	AAUGB03	CIF	New York	10-25 days forward	50,000	-	US\$	Barrel
FO No.6 0.7% New York Harbor delivered cargo	PAAAH00	PAAAH03	CIF	New York	10-25 days forward	50,000	-	US\$	Barrel
FO No.6 0.7% New York Harbor delivered cargo vs FO 1% NYH strip	AAUGC00	AAUGC03	CIF	New York	10-25 days forward	50,000	-	US\$	Barrel
FO No.6 1.0% New York Harbor delivered cargo	PAAAO00	PAAAO03	CIF	New York	10-25 days forward	50,000	-	US\$	Barrel
FO No.6 1.0% New York Harbor delivered cargo vs FO 1% NYH strip	AAUGD00	AAUGD03	CIF	New York	10-25 days forward	50,000	-	US\$	Barrel
FO No.6 1.0% New York Harbor FOB cargo	AAWL00	AAWL03	FOB	New York	10-25 days forward	50,000	-	US\$	Barrel
FO No.6 1.0% New York Harbor FOB cargo vs FO 1% NYH strip	AAWL02	AAWL03	FOB	New York	10-25 days forward	50,000	-	US\$	Barrel
FO No.6 1.0% New York Harbor strip	AAUGG00	AAUGG03		New York	10-25 days forward	25,000	-	US\$	Barrel
FO No.6 2.2% Boston delivered cargo	PUAWN00	PUAWN03	CIF	Boston	10-25 days forward	50,000	-	US\$	Barrel
FO No.6 2.2% New York Harbor delivered cargo	PAAAU00	PAAAU03	CIF	New York	10-25 days forward	50,000	-	US\$	Barrel
FO No.6 2.2% New York Harbor delivered cargo vs FO 1% NYH strip	AAUGE00	AAUGE03	CIF	New York	10-25 days forward	50,000	-	US\$	Barrel
FO No.6 3.0% New York Harbor delivered cargo	PAAAX00	PAAAX03	CIF	New York	10-25 days forward	50,000	-	US\$	Barrel
FO No.6 3.0% New York Harbor delivered cargo vs FO 1% NYH strip	AAUGF00	AAUGF03	CIF	New York	10-25 days forward	50,000	-	US\$	Barrel
FO RMG 380 New York Harbor FOB cargo	AAWLF00	AAWLF03	FOB	New York	10-25 days forward	50,000	-	US\$	Barrel
FO RMG 380 New York Harbor FOB cargo vs FO 1% NYH strip	AAWLF20	AAWLF23	FOB	New York	10-25 days forward	50,000	-	US\$	Barrel
USAC Marine Fuel 0.5%	AUAMA00	AUAMA03	CIF	New York	10-25 days forward	50,000	-	US\$	Barrel
USAC Marine Fuel 0.5%	AUAMB00	AUAMB03	CIF	New York	10-25 days forward	7,000	-	US\$	MT
FO Barge Rate NYH - Baltimore	AASTW00	AASTW03	-	New York	10-25 days forward	50,000	-	US\$	Barrel
FO Barge Rate NYH - Boston	AASTV00	AASTV03	-	New York	10-25 days forward	50,000	-	US\$	Barrel
FO Barge Rate NYH - Philadelphia	AASTX00	AASTX03	-	New York	10-25 days forward	50,000	-	US\$	Barrel
Caribbean & Latin America									
FO No.6 2.0% S Caribbean cargo	PAAAS00	PAAAS03	FOB	Caribbean	7-21 days forward	400,000	500,000	US\$	Barrel
FO 1.6% S FOB Colombia cargo	PPAR000	PPAR003	FOB	Cartagena/Covenas	7-21 days forward	200,000	-	US\$	Barrel
FO 1.6% S FOB Peru cargo	PPARK00	PPARK03	FOB	Talara	7-21 days forward	180,000	-	US\$	Barrel
FO 2.2% S FOB Ecuador cargo	PPASL00	PPASL03	FOB	Esmeraldas	7-21 days forward	150,000	-	US\$	Barrel

Fuel oil

Platts has defined standard specifications reflected in its fuel oil assessments. Information about bids, offers and trades for material with other quality specifications will be normalized for assessment purposes to the Platts specifications basis.

For FOB US fuel oil barge transactions, the seller should nominate the terminal within the specified port to the buyer at least 72 hours prior to the first day of the laycan, and provide the Certificate of Analysis to the buyer at the latest on the calendar day prior to the first day of the laycan. The buyer should nominate the lifting date within the three-day laycan, as well as the performing vessel, at least one calendar day prior to the lifting date, subject to terminal acceptance.

For CIF US fuel oil transactions, the buyer should nominate the port with the specific terminal to the seller at least five calendar days prior to the first day of the delivery date range. The seller should nominate the delivery date and performing vessel at least three calendar days prior to the first day of the delivery date range.

All nominations for both FOB and CIF US fuel oil barge transactions should typically be communicated to counterparties by 5 pm CT/6 pm ET.

US Gulf Coast

Platts US Gulf Coast fuel oil assessments reflect fuel oil loading basis FOB Houston from the following terminals: Intercontinental Deer Park Terminal, Magellan Galena Park Terminal, Bayport Container Terminal (LBC), Houston Fuel Oil Terminal (HOFTI) and Battleground Oil Specialty Terminal (BOSTCO). Bids, offers and trades published on any basis other than FOB Houston, including FOB New Orleans and FOB Galveston Bay, may be normalized for reflection in the USGC fuel oil assessments.

Below is a list of approved terminals for the USGC fuel oil MOC

process:
 FOB HOUSTON
 Magellan Galena Park
 Bayport Container Terminal (LBC)
 Houston Fuel Oil Terminal (HOFTI)
 Battleground Oil Specialty Terminal (BOSTCO)
 Kinder Morgan Galena Park (applies to USGC Marine Fuel 0.5% only)

FOB NEW ORLEANS*
 Gretna
 Marrero
 St. Rose

FOB GALVESTON BAY*
 NuStar Texas City
 World Point Terminals Pelican Island
 Texas International Terminal (applies to USGC Marine Fuel 0.5% only)

*May be normalized to FOB Houston

These assessments reflect barges loading seven to 15 days forward from date of publication with a minimum volume of 45,000 barrels except for No.6 slurry oil, which has a minimum volume of 25,000 barrels. For the USGC Marine Fuel 0.5% market Platts publishes an assessment in \$/mt reflecting a minimum volume of 7,000 mt. Platts also publishes the equivalent \$/barrel value for Marine Fuel 0.5% which reflects barges with a minimum volume of 45,000 barrels, and is converted from the \$/mt assessment using the published conversion rate of 6.35 barrels per mt. Timing laycans are standardized as front window (seven to nine days forward), middle window (10-12 days forward), back window (13-15 days forward), and full window (seven to 15 days forward). In any full window bid or offer, the buyer must declare a three-day delivery window upon lifting during the MOC process.

The inability of a terminal to receive certain standard barge sizes

may exclude certain trades from the assessment, even if a trade is done within the specified quantity range.

Product reflected in Platts assessments shall not contain petrochemical wastes, residues from acid-catalyzed refining process, spent chemicals, waste lubricants, tar bottoms or hazardous waste.

No. 6 1.0%: With effect from December 3, 2018, Platts has been assessing the value of No.6 1% USGC fuel oil barges by applying a differential -- based on the front month "hi-lo" spread in the US fuel oil paper market -- to the value of high sulfur fuel oil barges on the Gulf Coast. The differential is the sum of the front month "hi-lo" paper spread between USGC HSFO and USAC 1% fuel oil plus a fixed premium of 88 cents/b, reflecting the historically higher relative value of 1% fuel oil in the physical Gulf Coast market. This change was made due to the diminishing use of 1% fuel oil for power generation, which was the primary end-use of this product on the Gulf Coast. The No.6 1% USGC fuel oil assessment has historically reflected utility-grade fuel oil in line with Florida Power & Light specifications for maximum 1% sulfur fuel oil for delivery to Manatee and Port Everglades, with the exception of gravity of minimum 6 API and Al+Si metals content of maximum 80 ppm.

No. 6 Slurry Oil: This assessment reflects fuel oil with sulfur of maximum 1%; gravity of minimum 1 API; viscosity of maximum 225 SSF; flash point of minimum 140 F; ash of maximum 0.15%; water and sediment of maximum 1%.

USGC HSFO: This assessment reflects RMG 380 fuel oil in line with the ISO 8217:2010 standard for petroleum products - Fuels (Class F) - Specifications of Marine Fuels, but with a maximum sulfur limit of 3.5%.

RMG 380: This assessment reflects RMG 380 fuel oil in line with the ISO 8217:2010 standard for petroleum products - Fuels (Class F) - Specifications of Marine Fuels, but with a maximum sulfur limit of 3.5%.

USGC Marine Fuel 0.5%: This assessment reflects RMG 380 fuel oil in line with the ISO 8217:2010 standard for petroleum products - Fuels (Class F) - Specifications of Marine Fuels, but with a maximum sulfur limit of 0.5% and a minimum viscosity of 30 CST at 50 degrees Celsius. Hand blends are considered a common practice for Marine Fuel 0.5%S, and certificates of analysis should reflect a physical sample of the finished blend. As per Platts stated nomination guidelines, sellers should provide a COA at the latest on the calendar day before the first day of the reported laycan. Additionally, per the International Standards Organization's Publicly Available Specification 23263:2019, Platts expects sellers to provide COAs with a complete TSP test for 0.5%S marine fuel.

US Atlantic Coast

Cargo assessments

These reflect a minimum volume of 50,000 barrels delivered basis New York Harbor. For the USAC Marine Fuel 0.5% market Platts publishes an assessment in \$/mt reflecting a minimum volume of 7,000 mt. Platts also publishes the equivalent \$/barrel value for Marine Fuel 0.5% which reflects barges with a minimum volume of 50,000 barrels, and is converted from the \$/mt assessment using the published conversion rate of 6.35 barrels per mt. Bids, offers and transactions that reflect delivery to locations beyond New York Harbor, i.e. Boston-Maryland range, may be normalized by using prevailing freight rates as published by Platts. Cargo assessments reflect delivery in a five-day window, 10-25 days forward from the date of publication.

Product reflected in Platts assessments shall not contain petrochemical wastes, residues from acid-catalyzed refining process, spent chemicals, waste lubricants, tar bottoms or hazardous waste.

No. 6 0.3%S HP: This assessment reflects fuel oil with a minimum-maximum gravity of 10.5-24.9 API; viscosity of maximum 300 SSF; pour point of maximum 110 F; minimum of 149,000 BTU/gal; flash point of minimum 175 F; BS&W of

maximum 1.0%; sediment of maximum 0.3%.

No. 6 0.3%S LP: This assessment reflects fuel oil with a minimum-maximum gravity of 10.5-24.9 API; viscosity of maximum 1,000 SSU at 100 degrees F; pour point of maximum 60 F; flash point of minimum 150 F.

No. 6 0.7%S: This assessment reflects fuel oil with a gravity of minimum 10 API; viscosity of maximum 300 SSF; nitrogen of maximum 0.5%; vanadium of maximum 150 ppm; asphaltenes of maximum 8%; minimum of 151,500 BTU/gal; ash of maximum 0.1%; BS&W of maximum 1%; flash point of minimum 150 F; pour point of maximum 60 F; Al+Si of maximum 200 ppm.

No. 6 1.0%S: These assessments reflect fuel oil with an Al+Si content of maximum 80 ppm; nitrogen of maximum 0.5%; vanadium of maximum 150 ppm; minimum-maximum gravity of 10.1-18.0 API; minimum-maximum viscosity of 70-250 SSF; flash point of minimum 150 F; pour point of maximum 60 F; ash of maximum 0.1%; BS&W of maximum 1.0%; water by distillation of maximum 1.0%; sediment by extraction of maximum 0.1%; vanadium of maximum 150 ppm; sodium of maximum 60 ppm; asphaltenes of maximum 8%; minimum of 151,000 BTU/gal; H2S of maximum 50 ppm.

No. 6 2.2%S: These assessments reflect fuel oil with a gravity of minimum 10 API; viscosity of maximum 300 SSF; vanadium of maximum 300 ppm; Al+Si of maximum 80 ppm; flash point of minimum 150 F; BS&W of maximum 1%; ash of maximum 0.1%.

No. 6 3.0%S: This assessment reflects fuel oil with a gravity of minimum 10 API; viscosity of maximum 300 SSF; vanadium of maximum 300 ppm; Al+Si of maximum 80 ppm; flash point of minimum 150 F; BS&W of maximum 1%; ash of maximum 0.1%.

USAC Marine Fuel 0.5%: This assessment reflects RMG 380 fuel oil in line with the ISO 8217:2010 standard for petroleum products - Fuels (Class F) - Specifications of Marine Fuels, but with a maximum sulfur limit of 0.5% and a minimum viscosity of

30 CST at 50 degrees Celsius.

Barge rate assessments

Platts publishes spot barge rate assessments for the following routes: New York Harbor-Boston, New York Harbor-Philadelphia, and New York Harbor-Baltimore. These reflect a minimum volume of 50,000 barrels.

Caribbean

The Caribbean fuel oil No. 6 2.0% assessment reflects fuel oil with a sulfur of maximum 2.0%; viscosity of 225-300 SSF; gravity of 10-12 API. It reflects cargoes of 400,000 to 500,000 barrels, for loading seven to 21 days forward from the date of publication.

Platts defines the Caribbean as including any Caribbean islands. The Caribbean cargo value is assessed on an FOB basis. There is no central loading point for this assessment.

In the absence of spot market activity, the Caribbean cargo assessment is based on a spread against corresponding Platts US Gulf Coast fuel oil assessments for similar specification material.

Latin America

Colombia fuel oil: This assessment reflects the value of fuel oil loading from Colombia, FOB basis Mamonal (Cartagena) or Covenas, in cargoes of at least 200,000 barrels, for loading seven to 21 days forward from the date of publication. It reflects the value of fuel oil with maximum sulfur of 1.6%; maximum gravity of 6 API; and maximum viscosity of 300 SSF. Platts typically analyzes the value of Colombian fuel oil as a differential to its US Atlantic Coast 1% sulfur fuel oil assessment. The assessment is published as an outright value, in US dollars per barrel.

Ecuador fuel oil: This assessment reflects the value of fuel oil loading from Ecuador for export only, FOB basis Esmeraldas, for

loading seven to 21 days forward from the date of publication. The assessment reflects a minimum volume of 150,000 barrels, with spot trade typically observed at 190,000 barrels. It reflects the value of fuel oil with maximum sulfur of 2.2%; maximum gravity of 12-14 API; and maximum viscosity of 250 SSF. Platts typically analyzes the value of Ecuadorian fuel oil as a differential to its US Atlantic Coast 2.2% sulfur fuel oil assessment. The Ecuador fuel oil assessment is published as an outright value, in US dollars per barrel.

Peru fuel oil: This assessment reflects the value of fuel oil containing a maximum of 1.6% sulfur, for loading FOB basis Talara, in cargoes of at least 180,000 barrels, for loading seven

to 21 days forward from the date of publication. The assessment reflects the value of fuel oil with a gravity of 15 API; and a maximum viscosity of 600 CST. Platts typically analyzes the value of Peruvian fuel oil as a differential to its US Atlantic Coast 1% sulfur fuel oil assessment. The Peru fuel oil assessment is published as an outright value, in US dollars per barrel.

Fuel Oil Strips

Platts also publishes a daily Mean of Platts US Atlantic Coast 1% sulfur residual fuel oil Strip assessment and a daily USGC HSFO Strip assessment. The Strip is the value of the respective fuel oil swaps market effective for the mid-point of the physical

assessment (see “Explanation of the Strip,” in Part III of this document, for more details). Platts also began publishing the difference between the physical assessment and the USAC 1% sulfur residual fuel oil paper strip for the following New York-delivered, fuel oil assessments: 0.3%S HP, 0.3%S LP, 0.7%S, 1%S, 2.2%S and 3%S. The difference between the physical assessment and the USGC paper Strip for the following FOB Houston-based fuel oil assessments: Slurry Oil, 1%S, USGC HSFO and RMG 380 are also published.

Feedstocks

FEEDSTOCKS

Assessment	Code	Mavg	Contract basis	Location	Delivery period	Min size	Max size	Currency	UOM
US Gulf Coast VGO									
VGO 0.5%S CIF USGC	AAVMW00	AAVMW03	CIF	USGC	5-15 days forward	50,000	-	US\$	Barrel
VGO 0.5%S CIF USGC vs 70-30 midpoint	PKAA000	PKABW03	CIF	USGC	5-15 days forward	50,000	-	US cents	Gallon
VGO 0.5%S USGC vs WTI	AAJNY00	AAJNY03	CIF	USGC	5-15 days forward	50,000	-	US\$	Barrel
VGO 1.0%S CIF USGC	AAZMW00	AAZMW03	CIF	USGC	5-15 days forward	50,000	-	US\$	Barrel
VGO 1.0%S CIF USGC vs 70-30 midpoint	PKAAQ00	PKABX03	CIF	USGC	5-15 days forward	50,000	-	US cents	Gallon
VGO 1.0%S CIF USGC vs WTI	AAWLU00	AAWLU03	CIF	USGC	5-15 days forward	50,000	-	US\$	Barrel
VGO 2.0%S CIF USGC	AUVG000	AUVG003	CIF	USGC	5-15 days forward	50,000	-	US\$	Barrel
VGO 2.0%S CIF USGC vs 70-30 midpoint	PKAAS00	PKABY03	CIF	USGC	5-15 days forward	50,000	-	US cents	Gallon
VGO 2.0%S CIF USGC vs WTI	AAWL000	AAWL003	CIF	USGC	5-15 days forward	50,000	-	US\$	Barrel
VGO HS vs Maya crude	AASHB00	AASHB03	CIF	USGC	5-15 days forward	50,000	-	US\$	Barrel
US Atlantic Coast VGO									
VGO 0.5%S CIF USAC	AUVGA00	AUVGA03	CIF	North of Hatteras	5-15 days forward	50,000	-	US\$	Barrel
VGO 0.5%S CIF USAC vs 70-30 midpoint	AAJMW00	AAJMW03	CIF	North of Hatteras	5-15 days forward	50,000	-	US cents	Gallon
VGO 1.0%S CIF USAC	AUVGB00	AUVGB03	CIF	North of Hatteras	5-15 days forward	50,000	-	US\$	Barrel
VGO 1.0%S CIF USAC vs 70-30 midpoint	PKAAR00	PKACE03	CIF	North of Hatteras	5-15 days forward	50,000	-	US cents	Gallon
VGO 2.0%S CIF USAC	AUVGC00	AUVGC03	CIF	North of Hatteras	5-15 days forward	50,000	-	US\$	Barrel
VGO 2.0%S CIF USAC vs 70-30 midpoint	PKAAT00	PKACF03	CIF	North of Hatteras	5-15 days forward	50,000	-	US cents	Gallon
US West Coast VGO									
VGO 0.5%S CIF USWC	AUVGD00	AUVGD03	CIF	Los Angeles/San Francisco	5-15 days forward	50,000	-	US\$	Barrel
VGO 0.5%S USWC Dlv'd Waterborne vs 70-30 midpoint	AAJMX00	AAJMX03	CIF	Los Angeles/San Francisco	5-15 days forward	50,000	-	US cents	Gallon
VGO 2.0%S CIF USWC	AUVGE00	AUVGE03	CIF	Los Angeles/San Francisco	5-15 days forward	50,000	-	US\$	Barrel
VGO 2.0%S USWC Dlv'd Waterborne vs 70-30 midpoint	AAJNA00	AAJNA03	CIF	Los Angeles/San Francisco	5-15 days forward	50,000	-	US\$	Barrel
US Gulf Coast Straight Run Fuel Oil									
Straight Run high sulfur USGC	AALG000	AALG003	CIF	USGC	5-15 days forward	50,000	-	US\$	Barrel
Straight Run HS Dlv'd USGC vs WTI M1	AALGC00	AALGD00	CIF	USGC	5-15 days forward	50,000	-	US\$	Barrel
Straight Run HS Dlv'd USGC vs WTI M2	AALGE00	AALGF00	CIF	USGC	5-15 days forward	50,000	-	US\$	Barrel
Straight Run low sulfur USGC	AALGK00	AALGK03	CIF	USGC	5-15 days forward	50,000	-	US\$	Barrel
Straight Run LS Dlv'd USGC vs WTI M1	AALFS00	AALFY00	CIF	USGC	5-15 days forward	50,000	-	US\$	Barrel
Straight Run LS Dlv'd USGC vs WTI M2	AALFT00	AALFZ00	CIF	USGC	5-15 days forward	50,000	-	US\$	Barrel
US Atlantic Coast Straight Run Fuel Oil									
Straight Run HS Dlv'd USAC	AALGQ00	AALGQ03	CIF	North of Hatteras	5-15 days forward	50,000	-	US\$	Barrel
Straight Run HS Dlv'd USAC vs WTI M1	AALGG00	AALGH00	CIF	North of Hatteras	5-15 days forward	50,000	-	US\$	Barrel
Straight Run HS Dlv'd USAC vs WTI M2	AALGI00	AALGJ00	CIF	North of Hatteras	5-15 days forward	50,000	-	US\$	Barrel
Straight Run low sulfur USAC	AALGR00	AALGR03	CIF	North of Hatteras	5-15 days forward	50,000	-	US\$	Barrel
Straight Run LS Dlv'd USAC vs WTI M1	AALFU00	AALGA00	CIF	North of Hatteras	5-15 days forward	50,000	-	US\$	Barrel
Straight Run LS Dlv'd USAC vs WTI M2	AALFV00	AALGB00	CIF	North of Hatteras	5-15 days forward	50,000	-	US\$	Barrel

Platts assesses the value of vacuum gasoil on the US Gulf Coast, US Atlantic Coast, and the US West Coast. Platts also assesses the value of straight run fuel oil on the USGC and USAC.

Vacuum gasoil (VGO): Platts assesses the value of three grades, reflecting (1) a maximum sulfur content of 0.5%; (2) a maximum sulfur content of 1%; and (3) a maximum sulfur content of 2%. In all cases, the aniline point is a minimum 180 F. The aniline point signifies the temperature at which aniline and oil are equally mixable, and the relatively higher temperature signifies VGO that has a relatively lower aromatics content than VGO with an aniline point of minimum 160 F. Platts US VGO assessments reflect material with a Conradson carbon residue of maximum 0.7%.

Platts publishes its VGO assessments as outright assessments and as differentials against either the prevailing WTI crude futures contract and/or a weighted average of Platts waterborne regular gasoline and waterborne heating oil assessments. The weighted average (70% gasoline and 30% heating oil) is referred to as a "70/30 Midpoint". For differentials versus the prevailing WTI crude futures, the front month futures contract will be used and this will roll to the next month on the day the front month

contract expires. Platts will apply the front-month differential for the entire 5-15 day feedstock laycan. Platts may use market data priced off future months in the assessment, but it will be normalized to this basis.

Straight run fuel oil: Platts assesses the value of low sulfur straight run fuel oil, containing maximum sulfur of 0.3%; gravity of 20-22 API; viscosity of maximum 1,000 SSU (approximately 100 SSF); and pour point of maximum 60° F. Platts high sulfur straight run fuel oil assessments reflect fuel with a sulfur content of 2-3.5%, and a gravity of 15-20 API.

Platts publishes its straight run fuel oil assessments as outright assessments and also as differentials against the prevailing front month and second month WTI crude futures contracts. These will roll to the next month on the day of expiry. Platts will apply the front-month differential for the entire 5-15 day feedstocks laycan. Platts may use market data priced off future months in the assessment, but it will be normalized to this basis.

US Gulf Coast

Platts VGO and straight run fuel oil assessments on the USGC reflect shipments that are at least 50,000 barrels in size, for delivery five to 15 days forward from the date of publication on a CIF USGC basis.

US Atlantic Coast

Platts VGO and straight run fuel oil assessments on the USAC reflect shipments that are at least 50,000 barrels in size, for delivery five to 15 days forward from the date of publication on a CIF north of Hatteras, North Carolina, basis.

US West Coast

Platts VGO assessments on the USWC reflect shipments that are at least 50,000 barrels in size, for delivery 5-15 days forward from the date of publication on a CIF Los Angeles or San Francisco basis.

LUBES AND ASPHALT

Assessment	Code	Contract basis	Location	Currency	UOM
150SN Paraffin Far East	PLAAA00	-	Far East	US\$	MT
150SN Paraffin NWE	PLAAC00	-	Northwest Europe	US\$	MT
150SN Paraffin USGC	PLAAB00	-	USGC	US\$	MT
500SN Paraffin Far East	PLAAD00	-	Far East	US\$	MT
500SN Paraffin NWE Spot Hi	PLAAF00	-	Northwest Europe	US\$	MT
500SN Paraffin USGC Spot Hi	PLAAE00	-	USGC	US\$	MT
Bright Stock Far East	PLAAG00	-	Far East	US\$	MT
Bright Stock NWE Spot Hi	PLAAI00	-	Northwest Europe	US\$	MT
Bright Stock USGC Spot Hi	PLAAH00	-	USGC	US\$	MT
Asphalt Arkansas Rack	PPARP00	Rack	Arkansas	US\$	ST
Asphalt California Rack	PPARW00	Rack	California	US\$	ST
Asphalt Colorado Rack	PPARU00	Rack	Colorado	US\$	ST
Asphalt Georgia Rack	PPARQ00	Rack	Georgia	US\$	ST
Asphalt Illinois Rack	PPARX00	Rack	Illinois	US\$	ST
Asphalt Kansas Rack	PPARZ00	Rack	Kansas	US\$	ST
Asphalt Louisiana Rack	PPALA00	Rack	Louisiana	US\$	ST
Asphalt MidAtlantic Rack	AAWIC00	Rack	Mid-Atlantic	US\$	ST
Asphalt Minneapolis/StPaul Rack	PPARR00	Rack	Minneapolis	US\$	ST
Asphalt Montana Rack	PPASM00	Rack	Montana	US\$	ST
Asphalt Ohio Rack	PPARY00	Rack	Ohio	US\$	ST
Asphalt Oklahoma Rack	AAUQO00	Rack	Oklahoma	US\$	ST
Asphalt Tampa Rack	AAWID00	Rack	Tampa	US\$	ST
Asphalt Texas Rack	PPART00	Rack	Texas	US\$	ST

Lubes and asphalt

Platts assesses base oil lubes once a month, on the last business day of each month, for the following grades: 150SN, 500SN, and Bright Stock. Assessments are published for the following locations: US Gulf Coast, Europe (Northwest Europe) and Asia. Lube assessments are published in US dollars per metric ton, and based on market information throughout the month.

Platts assesses US spot asphalt every Friday for the following locations: Arkansas, Colorado, Montana, California, Illinois, Georgia, Minneapolis/St. Paul, Ohio, Oklahoma, Kansas, MidAtlantic, Tampa, Texas and Louisiana. Asphalt assessments are published in US dollars per short ton at the rack (unless specified otherwise) and based on market information throughout the week.

US 2:30 PM ET FUTURES

Assessment	Code	Contract basis	Delivery period	Currency	UOM
NYMEX RBOB at Houston MOC Mo01	NYRBM01	Exchange futures	M+1	US Cents	Gallon
NYMEX RBOB at Houston MOC Mo02	NYRBM02	Exchange futures	M+2	US Cents	Gallon
NYMEX RBOB at Houston MOC Mo03	NYRBM03	Exchange futures	M+3	US Cents	Gallon
NYMEX ULSD at Houston MOC Mo01	NYHOM01	Exchange futures	M+1	US Cents	Gallon
NYMEX ULSD at Houston MOC Mo02	NYHOM02	Exchange futures	M+2	US Cents	Gallon
NYMEX ULSD at Houston MOC Mo03	NYHOM03	Exchange futures	M+3	US Cents	Gallon

US futures

Platts assesses the value of key futures contracts at precisely 2:30:00 pm ET (1:30:00 pm CT). To do so, Platts analyzes the sequence of trades, bids, and offers on each of the relevant futures contracts leading into the transactable value at 2:30:00 pm ET.

These futures assessments are separate from the official NYMEX futures settlement prices, which are used as a component part in many Platts physical assessments in the Americas.

REVISION HISTORY

May 2020: Platts updated this guide to reflect the roll timing change for US natural gas liquids assessments, except for natural gasoline. The assessments reflect trading in barrels for delivery any day in the specified month -- also known as “any” barrels -- through the end of the month. Platts also updated its Light Straight Run naphtha assessment specification to reflect a more prompt laycan (3-15 days forward) and delivery basis (DAP). This update includes the addition of the Texas International Terminal as an acceptable terminal for FOB Galveston Bay for USGC 0.5% Marine Fuel. It also adds that 0.5%S marine fuel assessments reflect a minimum viscosity of 30 CST at 50 degrees Celsius. It adds that hand blends are considered common practice in the US Gulf Coast 0.5%S marine fuel market and that sellers should provide a COA with a complete TSP result. Platts added two daily assessments reflecting the value of 1 psi RVP for US Gulf Coast gasoline low-octane and high-octane CBOB with effect from March 30, 2020. The new assessments reflect the value in cents/gal of a 1-psi difference from a given RVP specification. Platts discontinued forward cycle assessments for the second through sixth shipping cycles of US Gulf Coast heating oil on Colonial Pipeline. Platts discontinued NGL assessments for River natural gasoline, LST isobutane, Bushton propane and non-LST ethane/propane mix month 2.

November 2019: Platts completed an annual review of the Americas Refined Oil Products methodology and specifications guide. Platts reviewed all content, corrected typos and made minor edits to language.

October 2019: Platts updated this guide to reflect changes to US Gulf Coast alkylate, reformate and raffinate barge assessment methodology, relating to delivery basis, laycans and specifications. Details were added of additional Brazilian Import Parity Prices for gasoline, jet fuel and diesel at new locations. This update also includes a clarification that Platts will continue to publish the USGC and USAC assessments for Marine Fuel 0.5% on a \$/b basis, and will derive these assessments by

converting the relevant \$/mt assessments using the existing conversion rate of 6.35 b/mt. July 2019: Platts updated this guide to reflect the change in the spill tax calculation for USAC gasoline cargo assessments, the removal of the ITC Deer Park terminal for consideration in USGC fuel oil assessments, the change in Chicago Buckeye Complex storage (BCX) to reflect eWindow timings and increments, and the addition of Kinder Morgan Galena Park terminal for USGC Marine Fuel 0.5% assessments. 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.

February 2019: Platts updated this guide to include details of new USGC and USAC Marine Fuel 0.5% assessments, updated ISO 8217:2010 standards reflected in all existing RMG 380 assessments, as well as the change in assessment methodology for USGC 1% fuel oil barges. This update also included details of new gasoline, diesel, jet fuel and LPG assessments delivered at Brazilian ports, and Import Parity Prices for the same products in Brazil. Platts also updated the description of its Colonial Pipeline Linden gasoline and distillate assessments to reflect new methodology on cycles assessed and location. The guide was also updated to reflect the change in the pricing basis for USGC and USAC VGO and straight run fuel oil differential assessments to the prevailing WTI crude futures contract.

August 2018: Platts completed an annual review of the Americas Refined Oil Products methodology and specifications guide. Platts reviewed all content, corrected typos and made minor edits to language. Platts also added a new section I to VI, and moved the explanation of EFPs and the Strip to Section VII. The guide was updated to clarify the methodology of existing Chicago pipeline assessments and the addition of Chicago BCX assessments. References to monthly averages of USAC gasoline supplementals were removed to reflect their discontinuation. In addition, language on the cycle rolls for Linden offline assessments was updated across all products. The guide was also updated to reflect the renaming of the FOB Houston

propane cargo assessment to an FOB USGC propane cargo assessment, as well as the additional loading locations that would be reflected in the assessment. Changes to the USGC propane cargo and shipping laycans were also incorporated, as well as the updated methodology for the USGC-Japan VLGC freight assessment. Platts also updated the guide to reflect the complete list of lubes and asphalt prices assessed, and standardized the names.

December 2017: Platts completed an annual review of the Americas Refined Oil Products methodology and specifications guide. Platts reviewed all content, corrected typos and made minor edits to language. Extraneous language in the text and extraneous columns in the tables were also removed; tables were also reorganized. In addition, the guide was updated to clarify that US refined product pipeline assessments reflect the latest product specifications of the relevant pipeline unless otherwise specified. Language on RINs and public dock clauses were updated for clarity, and references to USGC unleaded 93 gasoline supplemental assessments and USGC paraffinic naphtha assessments were removed to reflect their discontinuation. Language on USGC fuel oil assessments was updated to clarify the FOB Houston pricing basis and the inclusion of two Galveston Bay terminals to the USGC fuel oil MOC process. In addition, US fuel oil barge nomination standards were updated. The pricing basis for delivered USGC standard and heavy naphtha assessments was updated to reflect the change to DAP. Language in the jet fuel section was updated to clarify that US jet fuel assessments reflect Jet A specifications, as defined by the ASTM D1655 standard, unless otherwise specified. The guide was also updated to include new Mexico refined product assessments; revised methodology for USAC gasoline and distillate barges in terms of volumes, laycans and assessment principles; as well as new differential assessments for key US gasoline and distillate products. Language was also added around the possible change in assessed laycans for Buckeye and Laurel pipeline assessments if pipeline scheduling is affected by long holiday weekends.

January 2017: Platts updated this guide to include details of the renaming and specification change of its US Gulf Coast High Sulfur Fuel Oil assessments, and to reflect the discontinuation of US West Coast residual fuel oil assessments. Details were added for new gasoline assessments reflecting USGC trade on forward Colonial Pipeline cycles for CBOB and for Colonial Pipeline assessments at Linden, New Jersey for CBOB, RBOB and conventional 87. References to discontinued forward cycle assessments of USGC Colonial Pipeline premium conventional gasoline were removed. Details were added of a new assessment for 500 ppm Low Sulfur Heating Oil barges in New York Harbor. Platts has also removed references to a discontinued assessment for No. 2 heating oil on the Buckeye Pipeline in New York Harbor.

September 2016: Platts completed an annual update to the Americas Refined Oil Products Guide in September 2016. Platts updated this guide to reflect the change in Americas MOC timing to 2:30 pm Eastern Time and the use of NYMEX futures contract settlement prices as an element considered in Platts' physical refined product price assessments. Platts added references to additional communications technology, including ICE Instant Messenger and Skype. Platts has also removed references to discontinued assessments for Argentina Gasoline, Caribbean and Ecuador naphtha, Argentina and Caribbean gasoil, Argentina and Brazil fuel oil, as well as ratable supplemental assessments for RBOB and CBOB in New York Harbor. A number of minor edits were also made to the text throughout the guide, including a clarification that seller nominates loading dates in most FOB transactions (replacing a reference to Bill of Lading).

April 2016: Platts updated this guide to include details of new refined product assessments for gasoline, ULSD, diluent naphtha and natural gasoline in Latin America. Details of Platts Americas bunker fuel assessments, which are now included in a separate global methodology guide for bunker fuel, were removed. Atlanta gasoline assessments were removed to reflect their discontinuation, while details of the new US Gulf Coast Premium CBOB gasoline assessment were included. Details of

new outright price assessments for straight run fuel oil were included. Volume sizes for Platts Los Angeles CARBOB and Los Angeles CARB diesel assessments were updated to reflect a new minimum volume of 25,000 barrels. References to several discontinued supplemental US Gulf Coast gasoline assessments were removed.

September 2015: Platts updated this guide to include details of new outright VGO assessments for the USAC, USGC and USWC markets, as well as to clarify the location of some of the existing VGO assessments expressed as differentials to the 70:30 gasoline/heating oil spread. Platts also clarified the basis of its USGC Export ULSD assessment as being French Winter specification of EN590 ULSD for the entire year. **July 2015:** Platts completed an annual update to the Americas Refined Oil Products Guide in July 2015. In this update, Platts reviewed all content. Platts updated guidance around how to report information and expectations for contactability. This guide was updated to include further description of Platts' processes and practices in survey assessment environments. Platts updated the guide to include guidelines around trade of non-competitive bids and offers. Platts updated this guide to incorporate existing standards for compensation expectations for late performance. Platts also consolidated guidance regarding review of reported trades. In the specifications section of the guide, Platts added a description of the methodology for new assessments of line space for gasoline and distillates on the Colonial Pipeline. References to discontinued US Atlantic Coast distillate cargo and US Gulf Coast CIF naphtha cargo assessments were removed. The volume size of Los Angeles jet fuel was updated to reflect a minimum size of 25,000 barrels. The octane number of premium gasoline in Chicago was amended to reflect the Unleaded Chicago Pipeline as 91-octane. Duplicate table entries for a number of fuel oil assessments were removed. The methodology for USGC CIF naphtha barges was expanded to state that the assessment reflects market activity for product to be delivered in an agreed three-day delivery period. Platts removed all references to MDO which it no longer assesses in the Americas. Platts removed six repeated natural gasoline

code listings in its LPG assessments section, and a duplicated reference to Unl 84 FOB Argentina cargos. Platts standardized descriptions for LPG assessment codes, and removed references to "Cargo" in Conway descriptions for LPG. Platts removed references to propane and CARBOB swaps assessments, which are described in its Platts Forward Curve methodology guide. Platts removed references to MTBE assessments, which are described in its Americas Petrochemicals methodology guide. Platts removed references to Gasoline Strip Pipeline USGC Cts/Gal (AAWWD00 and AAWWD03), which is not assessed. Platts removed references to USGC naphtha cargo assessments that have been discontinued. Platts updated location descriptions for gasoline assessments in Boston and naphtha assessments in the Caribbean and South America. Platts removed references to assessments for RBOB 87 and 91 Arizona, which have been discontinued, and updated descriptions for suboctane assessments in code tables. Platts clarified that bids or offers for Barge/Buckeye reflect transactions where the initial market-maker seller is willing to deliver or accept either barge or a pipeline barrels at the counterparty's choice. Platts updated US West Coast gasoline descriptions to remove references to Las Vegas. Platts further added a description of the USWC waterborne gasoline assessment, updated the explanation of the 3.15 futures assessment tables, removed fuel oil swap definitions that appear in its PFC methodology guide, and added a reference to ISO 2012 detail on bunker fuel.

January 2015: Platts updated this guide to include a clarification of the Vacuum Gasoil specifications with relation to the maximum sulfur content and to include details of a new assessment for Export ULSD on the US Gulf Coast, which started December 1, 2014. Platts also added details of new 0.1% sulfur bunker fuel assessments which were launched January 5, 2015. References to both pipeline and waterborne US Gulf Coast Premium CBOB (D-Grade) gasoline were removed after these assessments were discontinued with effect from January 2, 2015. The description of USGC blendstocks reformate, alkylate and raffinate was changed to clarify that these are waterborne, not pipeline assessments.

July 2014: Platts completed an annual update to the Americas Refined Oil Products Guide in June 2014. In this update, Platts reviewed all content. Platts consolidated guidelines around publishing information during the MOC assessment process into the MOC Data Publishing Principles section, and incorporated clarification guidance about how to express interest in bids and offers that were published in January 2014 and May 2014. Platts also incorporated clarifications around book-outs, circle-outs, and editorial review of reported trades. The guide was updated to move a description of the propane FOB USGC cargo assessment, and related VLGC freight assessments, below propane pipeline assessment specifications; to update Group Three delivery laycans to next business day; update delivery ULSD (EPA) Portland and Seattle Pipeline to 1-4 days forward; reflect the discontinuation of US West Coast and Group 3 unleaded 87 gasoline assessments; reflect the discontinuation of Portland and Seattle unleaded 87 and premium finished gasoline assessments; reflect the launch of Portland and Seattle suboctane and premium suboctane gasoline assessments; separate US West Coast premium CARBOB specifications from CARBOB specifications; provide more information regarding the basis for blendstocks and naphtha barge differentials assessments; reflect additions of FOB US Gulf Coast naphtha cargo and light straight run naphtha assessments; add a

description of US Atlantic Coast ultra low sulfur jet kerosene usage; incorporate clarification for USAC jet fuel cargoes; reflect additions of US Atlantic Coast Linden, NJ assessments for jet fuel, ULSD, and ULS heating oil; reflect addition of ULS heating oil barge assessment basis New York Harbor; remove Chicago heating oil specifications; remove reference to a heating oil assessment in Chicago; reflect the discontinuation of a USWC gasoil assessment; and remove discontinued marine diesel and certain gasoline assessments and symbols; and correct the sulfur max stated in USGC Ultra Low Sulfur Diesel to max 11 ppm. This version updated increments and timings for Market-On-Close markets that are now facilitated through eWindow technology.

March 2014: Platts updated this guide to add details regarding propane cargo assessments in the USGC; update information for Chicago, Group 3 and Arizona gasoline assessments; clarify product references within the jet fuel section; add information regarding volumes and “distressed trades” in USWC jet fuel; describe nomination processes reflected in USAC heating oil assessments; update specification and volume references in ULSD; add information regarding volumes in the USAC fuel oil assessments; and clarify the location and volume basis for low sulfur bunker fuel. This update also corrected symbols

and delivery periods that were incorrectly assigned to certain US jet fuel assessments and added symbols for new products launched in the USGC ULS heating oil assessments.

November 2013: Platts updated this guide, making minor edits through the text. In this update, Platts added details for new FOB USGC propane assessments and related VLGC freight rate assessments. Platts also updated the minimum lot size reflected in its Chicago and Group 3 gasoline and middle distillates assessments, and added details of new assessments for suboctane gasoline in Group 3, Seattle and Portland. In the jet fuel section, Platts removed erroneous references to other fuels, and clarified the definition of distressed barrels in the West Coast market. Platts also amended the geographical reference for low sulfur bunker fuel assessments in the US.

August 2013: Platts revamped all Oil Methodology And Specifications Guides, including its Americas Refined Oil Products guide, in July 2013. 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.