METHODOLOGY AND SPECIFICATIONS GUIDE

Asia Pacific & Middle East Refined Oil Products

(Latest Update: November 2014)

INTRODUCTION

Platts' methodologies are designed to produce price assessments that are representative of market value, and of the particular markets to which they relate. Methodology documents describe the specifications for various products reflected by Platts' assessments and indexes, the processes and standards Platts adheres to in collecting data, and the methods by which Platts arrives at final assessment values for publication.

Platts discloses publicly the days of publication for its price assessments and indexes, and the times during each trading day in which Platts considers transactions in determining its assessments and index levels. This schedule of publication is available on Platts' website, at the following link: http://www.platts.com/HolidayHome.

The dates of publication and the assessment periods are subject to change in the event of outside circumstances that affect Platts' ability to adhere to its normal publication schedule. Such circumstances include network outages, power failures, acts of terrorism and other situations that result in an interruption in Platts' operations at one or more of its worldwide offices. In the event that any such circumstance occurs, Platts will endeavor, whenever feasible, to communicate publicly any changes to its publication schedule and assessment periods, with as much advance notice as possible.

All Platts methodologies reflect Platts' commitment to maintaining best practices in price reporting.

Platts' methodologies have evolved to reflect changing market conditions through time, and will continue to evolve as markets change. A revision history, a cumulative summary of changes to this and future updates, is included at the end of the methodology.

How this methodology statement is organized

This description of methodology for indexes and assessments is divided into seven major parts (I-VII) that parallel the entire process of producing the end-of-day price values.

- Part I describes what goes into Platts indexes and price values, including details on what data market participants are expected to submit, the process for submitting data, criteria for timeliness of market data submissions, as well as the components of published data.
- Part II describes any security and confidentiality practices that Platts uses in handling and treating data, including the separation between Platts price reporting and its news reporting.
- Part III is a detailed account of how Platts collects bids, offers, trades and other market data, and what Platts does with the data to formulate its indexes and assessments. It includes descriptions of the methods that Platts uses for reviewing data, and the methods used to convert raw data into indexes and assessments, including the procedures used to identify anomalous data. This section describes how and when judgment is applied in this process, the basis upon which transaction data may be excluded from a price assessment, and the relative importance assigned to each criterion used in forming the price assessment. This section describes the minimum amount of transaction data required for a particular price assessment to be published, and the criteria for determining which values are indexes, and which are assessments, based on reported transactions and other market information. Finally, this section describes how Platts addresses assessment periods where one or more reporting entities submit market data that constitute a significant proportion of the total data upon which the assessment is based.
- Part IV explains the process for verifying that published prices comply with Platts' standards.
- Part V lays out the verification and correction process for revising published prices and the criteria Platts uses to determine when it publishes a correction.
- Part VI explains how users of Platts assessments and indexes can contact Platts for clarifications of data that has been published, or to share a complaint. It also describes how to find out more about Platts' complaints policies.
- Part VII is a list of detailed specifications for the trading locations and products for which Platts publishes indexes or assessments in this commodity. This section describes why specific units of measurement are used, and what conversion factors are used to move between units of measurement, where relevant.

PART I: DATA QUALITY AND DATA SUBMISSION

Platts' objective is to ensure that the submission of transactional information and other data inputs that editors use as the basis for their price assessments is of the highest quality. Ensuring that data used in Platts assessments is of high quality is crucial to maintaining the integrity of Platts' various price assessment processes.

Platts encourages entities that submit any market data for consideration in its assessment processes to submit all market data that they have which may be relevant to the assessment being made. Platts' aim is to determine the full circumstances surrounding all reported transactional data, including details of quality, specifications, order sizes, dimensions, lead times and any locational and loading/delivery information. Platts uses that information to determine a typical and repeatable market level for refined oil products being assessed.

Platts routinely, and as part of standard editorial practice, reviews the companies participating in its price assessment processes. These reviews ensure the suitability of data and information that are used to formulate Platts' end-of-day price assessments. These reviews are conducted on a regular basis, and may take into consideration an array of issues including, but not limited to, adherence to editorial guidelines, operational and logistical issues, as well as counterparty acceptance.

The reviews are not designed to impede a company's ability to bilaterally engage in market transactions; the objective at all times is to ensure the integrity of published price assessments. Platts does not disclose the nature or scope of routine reviews of data providers that participate in its price assessment activities.

What to report

- Firm bids that are open to the marketplace as a whole, with standard terms
- Firm offers that are open to the marketplace as a whole, with standard terms
- Expressions of interest to trade with published bids and offers, with standard terms
- Confirmed trades
- Indicative values, clearly described as such
- Reported transactional activity heard across the market, clearly described as such
- Other data that may be relevant to Platts assessments

How to report

Platts accepts information provided for publication in real-time across a wide variety of media. The following reporting methods are accepted by Platts' editorial staff:

- Commonly used Instant Messaging software
- eWindow
- Telephone
- Email
- Fax

Platts accepts any reasonable method of delivery/communication for bids, offers and transactions. Platts editors typically communicate with trading companies through phone, eWindow or online instant messaging systems. Platts tries to accommodate the communication needs of its customers and will endeavor to open any additional communication channels required.

Reporters covering the products markets in Asia and the Middle East are contactable from around 09:30 to around 18:30 Singapore time.

MOC data publishing principles

Platts assesses the value of oil globally using its Market on Close (MOC) assessment process. The MOC assessment process establishes core standards for how data is collected and published, how data is prioritized by value, and ultimately how data is analyzed in the course of completing Platts assessments.

Transparency underpins Platts' data publishing processes in the oil markets. Under Platts MOC guidelines for collecting and publishing data, Platts publishes market information including but not limited to firm bids and offers from named companies, expressions of interest to trade and confirmed trades that are received from market participants throughout the day.

This information is published in real-time, as it is received, on Platts' information service, Platts Global Alert. Platts publishes all information received so that it can be fully tested by the market at large. Information collected and published includes the identities of buyers and sellers, confirmed prices, volumes, location, and stated trading terms.

Platts assessments are designed to reflect repeatable market value at the close of the assessment process. Platts tracks market price evolution during the entire day, and publishes a wide range of data relating to market value as it does so. All data that has been published through the day is analyzed during the assessment process. Towards the close of the day, Platts focuses its assessment process to publish named firm bids and offers, expressions of interest to trade and confirmed trades, with all relevant details. This transparent data is prioritized in the assessment process, because it is available to the entire market for testing.

In order to ensure that all firm bids and firm offers that still stand at the close of the assessment process have been fully tested in the market at large, Platts has established clearly defined time cut-offs that apply when publishing firm bids and firm offers in the MOC process. Time cut-offs for the submission and subsequent publication of new bids and offers are applied so that MOC participants cannot bid or offer late in the process, and to ensure that every bid and offer published by Platts is logistically executable.

Bids and offers published by Platts are considered to be firm until Platts is informed otherwise, or until the close of the assessment process for the day, whichever comes first. Platts will consider all firm bids and offers as open to the market at large and executable unless informed otherwise by the counterparty submitting the market information. If no communication is made to Platts to withdraw or change the parameters of the bid or offer it is assumed that it is available to the marketplace. Platts seeks verification of any transaction originating from a bid or offer submitted for inclusion in the Platts MOC process.

Detailed guidelines on MOC timings can be found at http://www.platts.com/IM.Platts.Content/MethodologyReferences/MethodologySpecs/timingincrementguidelines.pdf. The purpose of the time cut-offs is primarily to ensure logistical executability and standards of incrementability and repeatability to ensure orderly price discovery. As such, they may be changed at short notice if evolving market conditions require. To ensure proper dissemination of market information, new bids and offers for publication by Platts must be received by Platts no later than stated cut-off periods.

In order to ensure that all published data is fully tested in the market, Platts has established guidelines around how quickly bids and offers may be improved when they have been published, and by what amount. These incrementability guidelines define the quantum and speed at which bids and offers may typically be improved in the MOC assessment process. Incrementability does not apply to bids and offers that are moving away from market value, though Platts analyzes bids and offers that are moved lower, and higher, respectively, to ensure reasonability.

Incrementability varies between each market assessed through the MOC assessment process and can be found at http://www.platts.com/IM.Platts.Content/MethodologyReferences/MethodologySpecs/timingincrementguidelines.pdf.

Platts may notify the market of any adjustment to the standard increments in the event of market volatility or a disruptive event. A market participant can withdraw a bid or offer from Platts MOC process at any time, so long as no other potential trading counterparty has indicated that it has interest to buy or sell into the bid/offer.

Platts expects that market participants bidding and offering in the MOC process should perform on their bid/offer with the first company of record

to express interest to Platts for publication during the MOC process. In the event of a dispute on the timing, Platts will review its records and determine which company communicated to Platts first its intention to execute on a bid/offer displayed on the Platts systems. All the Platts systems operate on a first come, first served basis. This sequence is critical for orderly price discovery.

Platts' editorial guidelines governing its assessment process require it must consider only those transactions, bids or offers where market participants perform under typical contractual terms. Platts accepts that individual companies may have trading limits with counterparties and that national legislation may prevent companies from dealing in materials of certain origins. Such counterparty issues are dealt with on a case-by-case basis. Platts tracks all circumstances surrounding trades reported during its MOC assessment process, and any issues regarding performance. Platts not only focuses on the performance of the transaction at the time of trade, but also on any significant issues stemming from such trades, including logistics and eventual delivery of the product. Post-deal tracking enables Platts to determine the actual performance of the participants in the trade and the validity of their inputs. Platts therefore may request documentary material to determine performance and validity.

Platts cannot make any guarantee in advance about how and whether market information received and published but not fully adhering to its defined methodology will be incorporated in its final assessments.

All bids and offers are firm from the moment of submission. Submissions of bids, offers or transactions should not be considered as received by Platts unless acknowledged as received by Platts. For communication initiated by phone Platts will consider the time when the trader actually communicated the bid/offer or transaction.

For bids/offers and transactions communicated online, traders should not assume that Platts has received the communication unless acknowledged by Platts. Acknowledgment may take the form of "yes," "OK," "y," "k" or any other reasonable form.

For communication initiated by phone Platts will consider the time when the trader actually communicated the bid/offer or transaction.

Bids and offers submitted on time but in an incomplete form, where the terms are only clarified after the cut-off deadline, will not be used in the assessment process.

As a general recommendation Platts advises market participants not to wait for the last possible minute before the cut-off deadlines for bids and offers, as the communication may not be completed on time.

A buyer or seller can communicate with Platts directly to express buying or selling interest. Platts may also take into consideration bids and offers made via a broker, provided the buyer or seller have communicated to Platts that they have authorized the broker to speak on their behalf.

Platts only considers for publication and assessment transactional interest that is expressed by participants for bids or offers that have already been published by Platts. Interest in bids or offers at prices that have not been published, and therefore may not be fully available for testing in the marketplace as a whole, may be disregarded. Should a buyer lower its bid or a seller increase its offer, an expression to trade at a previously published level will not be considered.

Platts' editorial processes require full clarity when communicating bids/offers and intentions to trade. When expressing an intention to hit a bid or lift an offer in the MOC processes, any message should typically include the specific price of the trade and the name of the counterparty. Information may not be published if it is not sufficiently clear when communicated to Platts.

Platts recognizes the time of receiving a message of a company's intent to buy/sell, as opposed to the time a message was sent by the trading party.

Following any trade, the original on-screen seller/buyer must revert immediately as to whether or not he/she is prepared to offer or bid. An intention to rebids or reoffer must be received by Platts as soon as is possible and within a reasonable time frame.

Unless sellers/buyers expressly inform Platts of their continued interest to buy/sell after a deal, Platts will presume the players are not there for more volume.

The rebid or reoffer must match the initial position's parameters, with the exception of price. A rebid or reoffer can be made at the same level or inferior to the traded price. For example Company B hits Company A's bid for $500/mt during the MOC. Company A can rebid at $500/mt or below this level.

When there are multiple bids or offers at the same level, the first person to reach the market maker bid/offer level is the first person to be filled. Subsequent deals will go to the second, third and fourth market maker. This means that as each market maker at a level gets filled, repeat bids and offers will move to the back of the bid/offer order.

In the event that more than one counterparty expresses his/her intention to execute a transaction based on an existing bid or offer, the logical counterparty should be the first party that demonstrated its intention to trade. Platts will monitor time stamps or any other available time mechanism in the event of a dispute with the aim of determining who the first potential buyer of record was.

In the event of a market maker rebidding or reoffering during the Platts MOC assessment process, the queue of market takers expressing interest in that position will reform once the rebid or reoffer is published on PGA pages 5, 3, and 468. Platts will not consider any interest expressed in a rebid or reoffer before the position is published to be executable during the MOC assessment process.

After a bid or offer is published, only price can be changed. The volume, quality or loading/delivery timing cannot be changed.

Buyers or sellers can withdraw bids/offers at any time, provided no prior interest to transact has been expressed by any potential counter-party. If a market maker takes out another position during the assessment process, they must communicate to Platts if they wish to withdraw their existing position following the trade. Otherwise, it is assumed the market maker's own position remains active.

Bids/offers and trades are subjected to validation and verification by Platts editors. All bids and offers are made on a firm basis and are executable by any creditworthy counterparty with a good performance record. Entry of a bid, offer or transaction stemming from a bid or offer made in the assessment processes by Platts should be interpreted as an acceptance of Platts' editorial protocols.

All participants that have reported bids and offers for publication are expected to promptly report any transactions stemming from their publicly

available bids or offers.

Platts not only focuses on the performance of the transaction but also on issues stemming from it, including logistics and eventual delivery of the product. Post-deal tracking enables Platts to determine the actual performance of the participants in the trade and the validity of their inputs. Platts therefore may request documentary material to determine performance and validity.

Platts synchronizes its computer clocks every day precisely, and will compare the time of any submitted bid/offer or communication by a market participant intending to transact, against the computer time, in order to ensure that the cut-off points for new bids and offers, price changes and the market's close are accurate. Please note that Platts applies the timing deadlines strictly.

For the purposes of clock synchronization, market participants may find the following internet link to be helpful: www.time.gov. This link offers an atomic clock reading for US time zones.

In markets where Platts' eWindow is in operation, the eWindow clock will be used to determine the correct sequence of events when a bid or offer is amended, withdrawn, or traded by an interested counterparty. Bids or offers submitted by phone, or any other medium such as instant messaging software, shall be clocked at the time the bid, offer or trade indication is actually transmitted through the Platts eWindow system. As per Platts methodology, buyers or sellers can withdraw bids/offers at any time when communicating through eWindow, provided no prior interest to transact has been expressed by any potential counterparty. All bids and offers are firm from the moment submitted into Platts eWindow to the moment they are traded, the window period closes or the bid/offer is withdrawn from the system by the trader or a Platts editor.

Platts is an information company and it aims to publish any credible bid or offer reported to it. Platts makes no commitment to publish every bid or offer submitted to it, however. For instance, frivolous bids and offers may not be retransmitted. Information reported by market participants that may have legal implications, for instance potential slander, will not be reported.

Terms of trade such as quality, delivery port, timing of delivery/loading and price are fully up to the company issuing the bid or offer.

Bids and offers which are deemed as atypical relative to the market will not be fully taken into consideration for the assessment process. Such bids/offers or transactions would be at best indicators of an overall market condition but they would not be seen as exact indicators of market price.

Any unusual condition or request regarding the cargo should be specified at the moment the initial bid or offer is made. Any unusual request that surfaces at the time a counter party is ready to trade and that impedes the normal flow of a transaction could be seen as an impediment to trade.

Information reported by market participants that may have legal implications, including but not limited to potential libel, will not be published.

Market participants are encouraged to inform Platts when they cannot trade with another typical market participant due to performance, credit or legal issues before the cut off deadlines for initial bids and offers. Platts may ask market participants to provide supportive documentation to ensure the integrity of its assessment process.

PART II: SECURITY AND CONFIDENTIALITY

Data is stored in a secure network, in accordance with Platts' policies and procedures. Platts refined oil product assessments are produced in accordance with Platts' Market on Close assessment methodology. This means that all data for use in Platts refined oil product assessments may be published by Platts editorial staff while assessing the value of the markets.

Platts does not have confidentiality agreements in place for information that is sent for use in its refined oil product assessments.

PART III: CALCULATING INDEXES AND MAKING ASSESSMENTS

The following section describes how Platts uses the specific volume, concluded and reported transactions, bids, offers and any other market information it has collected, in the manner described in section one, to formulate its price assessments. Additionally, this section describes other information, including the normalization of market data, assumptions and extrapolations that are considered when making a final assessment.

MOC price assessment principles

Through the MOC assessment process, Platts considers market information gathered throughout the normal trading day, and publishes such information throughout the day. Platts analyzes all published information in determining its final published price assessments.

Through the MOC assessment process, Platts seeks to establish and publish the value of markets that prevail at the close of the assessment process itself. Platts has aligned the timestamps reflected in its assessments with what typically is a period of high activity in the markets that Platts observes. The typical period of high activity in oil markets tends to be in the afternoon in every major trading location around the world. Platts believes that aligning its price assessments to typical periods of greater market activity and liquidity provides a robust basis upon which to derive a reliable assessment of market value.

Platts has adopted the MOC methodology in order to provide complete clarity over the precise point in time reflected in its market assessments. Like the quality of oil, its delivery location, delivery dates, contract terms, and the volume to be supplied, the time of commercial activity is an important attribute considered in Platts price assessments. The time that a bid or offer is shown to the market, or a transaction concluded, is vitally important in understanding the market value of the respective commodity, in the same way that the quality of the oil, where it will be delivered and when it will be delivered are important factors. By clearly reflecting value at a defined point in time Platts is able to properly reflect outright and spread values.

The clarity established by providing a well-defined timestamp for Platts assessments is important in understanding every oil assessment published by Platts. It is also important for understanding the relationships between the markets that Platts assesses. By ensuring that all assessments within a region reflect market values at the same moment in time, spreads that exist between those products are also able to be fully and properly reflected. For example, comparing the value of gasoline to crude oil is possible when both values have been determined at the same moment in time. By contrast, comparing the price of gasoline

in the morning, to crude oil in the afternoon, might deeply impair the relationship between the products – particularly when the respective market prices move independently during the intervening period.

By providing clear timestamps for assessments, the Platts MOC process is designed to provide assessments that properly reflect outright and spread values during times of high volatility equally well as in times of modest volatility.

MOC guidelines are designed to avoid distortion of the final price assessments by eliminating inputs that are not fully verifiable, and by disregarding one-offs or unrepeatable transactions, or those that may distort the true market level. Transactions between related parties are, for instance, not considered in the assessment process.

Platts does not specify a minimum amount of transaction data, or a transaction data threshold, for the publication of its price assessments. Physical commodity markets vary in liquidity. Any particular market analyzed on its own will typically demonstrate rising and falling levels of transactional activity through time. Platts is committed to providing an assessment of value for every market that it covers, equally well in times of heightened or reduced liquidity.

Platts seeks to receive market information from as broad a cross section of the market as possible. If a very limited number of market-makers are active in the market, or if a limited number submit data that constitutes a significant proportion of the total data upon which the assessment is based, Platts will continue to seek fully transparent and verifiable data from the market at large and to apply Platts methodology principles of transparency and time sensitivity. Platts considers data for assessment of any market where a single company provides more than half of all available information to be one where such a company provides a significant proportion of data. For consideration in the MOC process such a company's bids or offers must be clearly available for execution by any other potential MOC trading counter party.

Law

Contracts using English law are considered standard in the assessment process.

Embargoed products

Laws stating that nationals from specific countries may not buy products from embargoed countries may prevent market participants from lawfully executing transactions. A seller therefore may not assume that a buyer has the obligation to buy embargoed materials. Under Platts Market on Close assessment guidelines, commodities supplied from countries or entities that are subject to trading embargoes and sanctions recognized under international law should not be delivered against transactions concluded during the Platts MOC assessment processes. Bids and offers that contain statements surrounding delivery of embargoed materials will be considered by Platts for publication, and if published after review may be subject to normalization in value.

Late performance

Platts is aware that physical conditions regarding shipping, terminals, tanks, or blending which are beyond the control of the seller or buyer may result in lateness, quality issues or conditions seen as a deviation from the original wording in the contract, for example late delivery/loading. These deviations will be seen in the larger context of physical trading, and should not be seen as an indication of Platts condoning lateness.

Platts will review patterns of logistical performance, as adjustments due to late performance, quality issues should be extraordinary and not recurring events.

Participants who are intending to sell should not offer when there is a known and distinct possibility that loading/delivery may be delayed. If congestion or delays prevent performance under the contractual terms, the seller should make reasonable and timely efforts to supply from an alternative source, or the seller should engage in other measures to alleviate the buyer's exposure.

Equally, a buyer should not over-commit and then aggregate nominations in a way that makes it logistically impossible for the seller to perform. Platts will take appropriate steps to ensure the integrity of its assessments if issues of non-performance should arise.

In summary, performance is paramount and all bids, offers must be firm and transactions should be performable within the contractual parameters.

Platts only recognizes bids, offers and transactions where no party claims a right to unilaterally cancel a transaction. If a transaction becomes difficult the party causing the issue must seek resolution including alternative loadings, qualities, dates or book outs.

Compensation

Platts only publishes bids, offers and transactions on the basis that participants will fulfil the full value of the physical contract.

A party deemed to have underperformed or not performed under the original contract is expected to compensate the affected party.

In almost all circumstances, the compensation is not, and should not be due to a flat price movement, but should be to include parameters such as backwardation, shipping costs, and the inconvenience for the buyer in the case of a seller not performing, or contango, storage costs and the inconvenience for the seller in the case of a buyer not performing.

Such adjustments should be fair and in line with market practice, and should be reciprocal in the event that the inverse situation occurs in the future.

Force majeure

Force majeure is part of trading and may be invoked under very special circumstances. Platts editors will monitor the application of it to ensure that force majeure is not invoked frivolously.

Booking out trades

Booking out trades done during the Platts Market-on-Close assessment process is acceptable under exceptional circumstances. A stressed party may request to book out a trade, but its counterparty is under no obligation to accept such request.

In those exceptional cases where both counterparties agree to book out

a trade, Platts expects the original spirit of the contract to be fulfilled where the non-performing party offers to buy/sell back the position and compensates the affected party.

In almost all circumstances, the adjustment is not and should not be due to a flat price movement, but should be to include parameters such as backwardation, shipping costs and the inconvenience for the buyer or seller expecting a normal transaction. Such adjustments should be fair and in line with market practice, and should be reciprocal in the event that the inverse situation occurs in the future.

Furthermore, circle outs may occur when the original seller sells a cargo that is later sold into a third party that has a sale into the primary seller. Such "circle outs" are considered a normal part of trading as sometimes chains originate and finish at the same point.

Book outs and circle outs are subject to editorial review to ensure market practices and overall fairness in the transaction have been followed. Platts review may include proposals/arrangements to protect the integrity of its assessment process.

Review of trades

Trades executed through the Platts Market On Close assessment process may be reviewed from time to time for performance completion. Platts therefore may request documentary material to determine performance and validity. Such material may include details of terminal, vessel and laycan nominations. MOC trades may be subject to editorial review to ensure market practices and performance in the transaction have been followed. Platts' review may include arrangements to protect the integrity of its assessment process.

Normalization price adjustment techniques

Platts seeks to align the standard specifications for the oil markets it assesses and the timestamps reflected in its assessments with standard industry practice. However, physical commodity markets are generally heterogeneous in nature – not only can time of transactional activity considered for inclusion in the price assessment process vary through the day, other key attributes often vary from the base standard reflected in Platts assessments as oil is supplied to market.

The quality of fuel supplied, delivery location, and other specific terms of trade may be varied in the physical commodity markets assessed by Platts. This is one reason among many why data collected from the physical oil markets may not be simply averaged to produce a representative benchmark value.

Because of the complex nature of the physical oil markets, oil market data typically must be aligned with standard definitions to allow for a fully representative final published assessment. Platts aligns data collected through an analysis of the physical oil markets with its standard assessment specifications through a process called normalization.

Normalization is an essential price adjustment technique applied by Platts, to align reported market information to reflect the economic relationship between specific reported activity and the base standard reflected in Platts price assessments.

By surveying markets and observing the economic impact of variance from the base standard reflected in Platts assessments, Platts regularly normalizes disparate information from the diverse physical commodity markets back to the standard reflected in Platts price assessments. This is done by analyzing freight rates (for locational differences), quality premiums (for quality differences), the movements of all markets through time (for time differences) and other premiums associated with the size of trades and delivery terms.

Normalization for time may be done by analyzing movement in a related market observed through time, and that movement may provide a basis by which to align market value of an earlier reported bid, offer or transaction to market value at the MOC close. This alignment for time is essential to ensure that Platts price assessments reflect the prevailing value of a market at the close of the MOC process.

Prioritizing data

Platts assessment process considers firm bids, firm offers and transactions that are transparent and open to any counterparty with the proper financial and operational resources. Bids, offers or transactions that are not transparent may not be considered in the assessment process. Naturally, bids above transparent offers or offers below transparent bids are not considered in the assessment process. Platts considers changes to bids or offers when those changes are made transparently and in normal increments.

The level of each bid or offer must stand firm in the marketplace long enough for any counterparty to hit the bid or lift the offer, otherwise the bid or offer may be deemed non-executable. Platts may not consider bids, offers or transactions that are the result of market gapping, i.e. changes that are in excess of normal market practice.

Transparency underpins Platts' assessment process, just as it does Platts data publishing processes, in the oil markets. When determining a final market assessment, Platts gives the greatest priority to fully verifiable and transparent market information. A firm bid or offer that has been published by Platts in accord with its data publishing standards, and which still stands open to the marketplace at the close of the assessment process, will establish clear parameters for Platts' final published assessments. Platts will typically assess market value somewhere between the best bid, and best offer, open to the market at the close of the MOC process. This ensures that Platts assessments reflect the transactable value of the commodities it is assessing at the close of the market.

Completed, transparent transactions that are fully published by Platts are important in helping establish where trading interest prevails in the market, and may help determine where, in a bid/offer spread, Platts may assess value for publication.

Firm bids and offers that are available to the entire market take precedence over trades that have been concluded earlier in the assessment process when establishing the value of the market, particularly if bids are available at the close above previously traded levels, or offers are available to the market below previously traded levels. Value is a function of time.

Similarly, firms bids and offers that are available to the entire market take precedence over transactional activity reported to Platts after the fact.

When no bid, offer or transaction data exists, Platts may consider other verifiable data reported and published through the day, including fully and partially confirmed trades, notional trading values and other market

information as provided for publication. Under such circumstances, Platts may also be able to observe direct market activity or the effect of commonly traded commodities on illiquid markets via spread differentials or via blending and shipping economics.

Platts also analyzes the relationships between different products, and factors these relationships into assessments for markets where transactional data falls to low levels. Finally, Platts normalizes other available data that may be relevant to the assessment during periods when low amounts or no transactional data exists, including transactional data from related markets, in the manner described above.

To do this, Platts takes into account representative transactions executed at arms-length in the open market occurring during the MOC price assessment period and additionally taking into account bid and offer information submitted during this period. Platts editors always seek direct verification from the principals to a reported bid, offer or deal.

Platts MOC guidelines are designed to avoid any distortion of the final price assessment and so inputs that are not verifiable are eliminated and "one-off" or unrepeatable transaction data may be disregarded from the price assessment process.

Single transactions may be a reflection of market value. However single transactions need to be measured against the broad span of similar transactions. If for instance a buyer decides to lift an offer but is unwilling to buy more material offered at the same level if the seller reoffers it would be determined that the buyer failed the repeatability test. Equally if the seller does not reoffer, the seller fails the repeatability test. As such the transaction may not be fully reflected in the price assessment.

A variant on this action is price "gapping" when bids are made too high and offers are made too low through untested levels of price support or resistance. Platts may not publish such bids and offers during the MOC process. When transactions are concluded at levels that have not been fully tested by the market because price changes have been non incremental, Platts may determine that actual market value is somewhere between the last incremental bid and the transaction at the gapped level.
Assessment Calculations

Platts publishes its assessments reflecting the currencies and units of measurement in which the products typically trade.

Oil is generally traded in US dollars, and Platts assessments are typically published in that currency as a result. Certain markets, such as regional markets, trade using local currency. Platts assesses the value of such markets as appropriate in local currency.

Crude oil is typically traded in barrels or metric tons, and Platts publishes its assessments using these units of measurement as they prevail in practice. Likewise, refined oil products typically traded in barrels, metric tons or gallons, and Platts assessments for these markets reflect common practice in each market. The minimum and maximum volume considered for each individual Platts assessment of a physical market is described in section VII of this document.

In certain cases Platts converts its assessments to other currencies or units of measurement to allow for ease of comparison or analysis in regional markets. Such conversions are done using published exchange rates and conversion factors.

Platts reporters follow specific methodology when exercising editorial judgment during their assessment process. Platts editors apply judgment when determining (1) whether information is suitable for publication, (2) when normalizing data and (3) when determining where to assess final value of market.

Judgment may be applied when analyzing transactional data to determine if it meets Platts standards for publication; judgment may also be applied when normalizing values to reflect differences in time, location, and other trading terms when comparing transactional data to the base standard reflected in Platts assessments.

All such judgment is subject to review by Platts editorial management for adherence to the standards published in Platts methodologies. The following section illustrates how these guidelines work when calculating indexes and making assessments.

To ensure the assessments are as robust as possible, Platts editorial systems are backed by a strong corporate structure that includes managerial and compliance oversight. To ensure reporters follow Platts methodological guidelines in a consistent manner, Platts ensures that reporters are trained and regularly assessed in their own and each other's markets.

Application of professional judgment guidelines promotes consistency and transparency in judgments and is systematically applied by Platts. Where professional judgment is exercised, all information available is critically analyzed and synthesized. The various possibilities are critically analyzed and fully evaluated to reach a judgment. Platts manages and maintains internal training guides for each of the different products assessed which aim to assist assessors and ensure Platts' price assessments are produced consistently. Platts' price assessments are reviewed prior to publication and exercise of professional judgment is further discussed and verified during this process. Finally, consistent with the concept of proportionality, assessments that are referenced by derivatives contracts are supported by assessment rational, including the application of judgment, which is published together with the price assessment offering full transparency to the market.

Reporters are trained to identify potentially anomalous data. We define anomalous data as any information, including transactions, which is inconsistent with or deviates from our methodology or standard market conventions.

As a publisher owned by McGraw Hill Financial, independence and impartiality are at the heart of what Platts does. Platts has no financial interest in the price of the products or commodities on which it reports. Platts' aim is to reflect where the actual market level is.

Platts focuses primarily on assessing the value of oil trading in the spot market. A spot price for a physical commodity is the value at which a standard, repeatable transaction for merchantable material takes place, or could take place in the open market at arms' length. In oil, Platts' spot price assessments reflect the value at which transactions take place, or could take place, at precisely the close of the MOC process.

Platts' overall objective is to reflect the transactable value of the commodity assessed. In cases where the apparent value of the commodity includes extra optionalities, the intrinsic value of the commodity may be masked. In such cases, Platts may use its editorial judgment to factor out such extraneous elements from the value of the commodity, or it may decide not to use the bid, offer or transaction in its assessment process. Optionalities that may mask the value of the commodity include but are not limited to loading or delivery options held by the buyer or seller, volume option tolerances exercisable by the buyer or seller or quality specifications.

Platts assesses the outright value of oil around the world, as well as differentials for oil when it trades with reference to a benchmark. Platts analyses all data collected and published by Platts throughout the day. Final assessments are above firm bids, and below firm offers, that stand at the close of the Market on Close assessment process. This is true for outright values and differentials. In the event of an observed conflict between outright values and differentials, outright values prevail in Platts final published assessments.

Platts produces time-sensitive assessments that reflect the value of the markets it covers precisely at the close of the MOC price assessment process in Singapore, Dubai, London and Houston. By providing clear timestamps for every region the Platts assessment process is designed to provide price assessments that properly reflect outright and spread values.

As an example, gasoline has a value, naphtha has a value and the gasoline versus naphtha spread has a value, and all three make sense when measured on a same-time basis. By contrast, a system of averages can lead to distortions in the gasoline versus naphtha spread if the distribution of deals done for gasoline and naphtha differs over the averaging period. Thus if gasoline trades actively at the beginning of the assessment period and naphtha trades actively at the end of the assessment period in a rising market, the assessed spread value resulting from an averaging process will not be reflective of actual market values. This distortion can arise even if the value of spread trades in their own right has remained constant. The MOC approach drastically reduces the possibility of such distortions.

Assessments reflect typical loading and delivery schedules for each market assessed. The standard loading and delivery windows are specified under each data code.

Market structure such as backwardation and contango is also factored into the Platts' assessment process. If a company offers a cargo loading 15 days forward, the offer may provide market information for the Platts assessment for cargoes loading 15 days forward. Platts would still need to assess days 16 through 30 (in a 15-30 day market) and publish an assessment that reflects market value 15-30 days forward ahead of the day of assessment.

Time gradient

Platts is very stringent in following timings for loading or delivery due to the variability in market values across time. This variability increases as the backwardation or contango in the markets increases.

It is not uncommon in times of tight supply for the backwardation to be over $15.00/mt per month or roughly the equivalent of $0.50/mt per day. This means that cargoes loading one week apart can vary in price by close to $3.50/mt, or possibly more, depending on the steepness of the price curve. Thus it is extremely important for Platts to follow pricing windows very methodically.

Platts factors in the backwardation/contango and reflects its impact on the published assessment. The assessment reflects the value of the commodity normalized to the center of the loading/delivery window. In a contango market, the excess of prompt barrels causes the front end to be significantly cheaper than barrels available at the end of the window. In a backwardated market the tightness of supply causes the prompter barrels to be at a higher price than barrels available at the end of the window.

Platts' methodology eliminates any arbitrary movement in assessments caused simply by the different loading/delivery ranges traded. By normalizing prices to the mid-point of a clearly defined date range, the consistency of prices is maintained. The day-to-day changes in the price assessments therefore reflect an actual price move in the value of the commodity, rather than an artificial change because a cargo happens to be loading/delivering in the front end of the window rather than the back end, or vice versa.

The date ranges reflected by Platts reflect the prevailing trading practices in the European region. By not taking the first ten days into consideration, transactions reflecting distressed prices are excluded.

Determination of backwardation or contango

Platts' assessments determine fair market value and therefore consider backwardation and contango. Where indications are on differing date ranges, a calculation is made to determine the value the market is assigning for the difference between loading dates. In calculating this time gradient, the prices of tradable instruments such as futures and swaps may be used.

Typical calculations include a determination made for the difference in price for a month, and a daily value is then assigned for each day.

The three main factors used in the European products market for price determination are:

- Outright price
- Premiums
- Paper/Swaps

Outright price

The ultimate question in the mind of an end-user, producer, refiner, trader or broker is price. An outright price is the simple statement of a price at which something can be bought or sold, with the entire value stated clearly – for example, an offer of a cargo of naphtha at $950/mt. Price in turns determines expense, refining margin, profit, loss, etc. The spot market trades actively on an outright price basis, and a floating price basis, where some of the value is established at the time of trade, and some is determined at a future date. Platts takes both into account in its assessments. Platts will publish activity on both a fixed and floating basis.

Premiums/discount

Many transactions are carried out on a floating price basis, in relation to a benchmark. In this case a differential, also known as premium/discount is generated. Premiums/discounts can arise if the quality, volumes or loading times differ from the benchmark. In addition, floating price transactions are done in relation to assessments that will be published in the future – for example, a bid for a cargo of 380CST fuel oil at $10/mt above the Platts MOPS 380CST Singapore , as published immediately before, during and after delivery of the cargo.

Premiums will usually rise in those times when the market is backwardated, and the steeper the curve, the greater the premium. In a

contango situation, premiums will have a tendency to turn into discounts. Platts will publish activity on both a fixed and a floating basis.

Paper/Swaps

Paper/swaps are a major determinant in price. Swaps trade freely in an over the counter market and can trade at any time. Paper markets are very reactive and may provide players with an instant feedback of market conditions. Swaps react to arbitrage conditions or movements in overseas markets as well as local conditions.

Swaps or paper are risk-management tools. Swaps allow players to lock prices because swaps enable players to transform floating prices to fixed or fixed to floating. Swaps are also used as a speculative tool. Swap market values and indications are carried in real-time on PGA.

Buyers and sellers may show buying and selling interest for all derivatives assessed by Platts through MOC processes in the same way as is done in physical markets.

The spot market

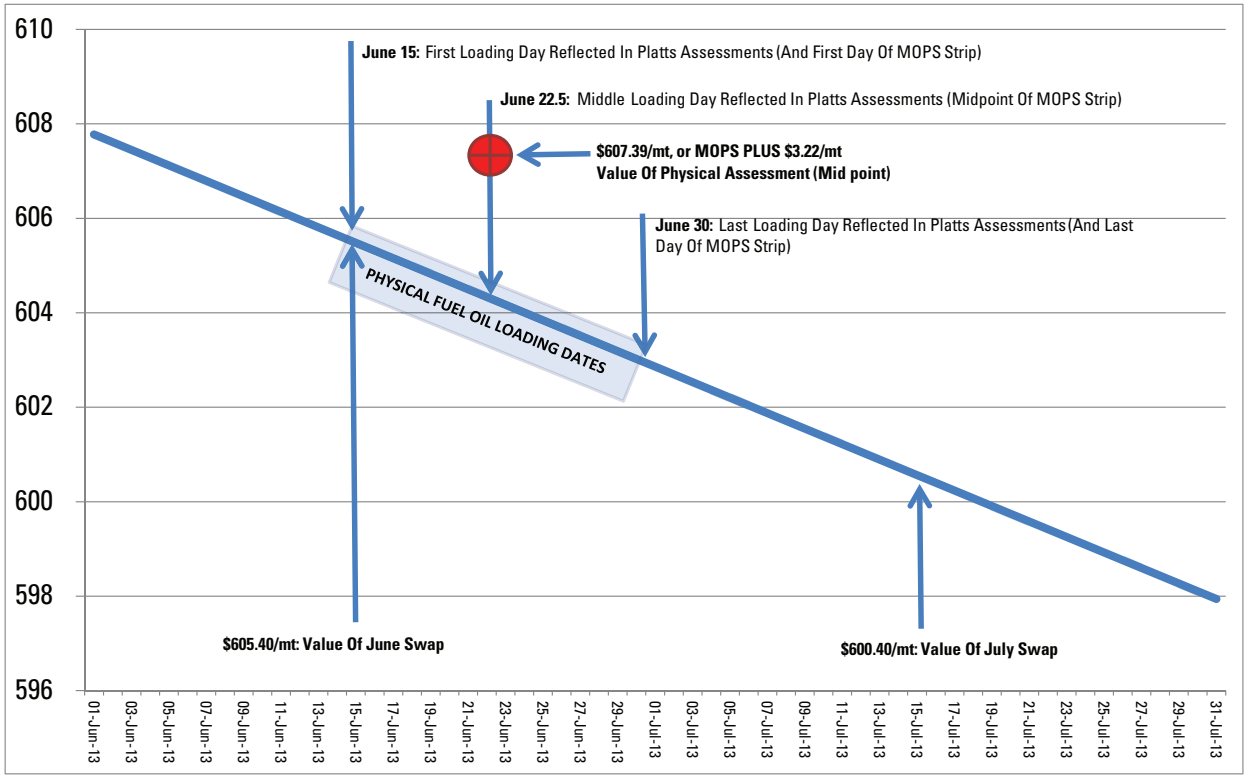
These three factors — outright price, premiums and paper – converge in a spot price. Platts may use all three in its assessments. In the absence of outright prices, swaps and prevailing premiums/discounts may be used in the assessments.

Explanation of the MOPS Strip

This explanation for the MOPS strip describes how it is determined, and its application in Platts' assessment process.

The Platts assessment process determines the value of physical commodities 15-30 days forward for many oil products loading in Singapore. 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.

Illustration of the MOPS Strip



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.

"MOPS" is an acronym that stands for the "Mean of Platts Singapore," and typically refers to any contract mechanism that derives its value by referencing the average of a set of Singapore-based oil price assessments to be published by Platts in the future – over a week, a month, or any agreed period of time. 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 "MOPS Strip" is the sequence of 16 days that represent the future loading dates reflected in Platts' Singapore oil product assessments.

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

A swap is a financially-settled derivative contract traded in the over-the-counter market. Sometimes referred to as "paper", a swap is a fixed price transaction, where the buyer is paid (or pays) the difference between the agreed strike price in the contract, and the actual average value of

an underlying reference benchmark price. As an example, MOPS-related December "Singapore 180CST fuel oil swaps" settle their value from the average of assessments for the value of 180CST fuel oil, FOB Singapore, as published by Platts over the month of December.

As financially settled contracts, swaps derive their value from published benchmark assessments. They do not entail physical delivery of oil. For example, if a 1,000mt June swap was bought at $605/mt, the seller would pay the buyer $10/mt (or $10,000 in this example) if the underlying benchmark averaged $615/mt over the month of June; the buyer would pay the seller $10/mt (or $10,000 in this example) if the reference price averaged $595/mt. Swaps, 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 can only be completed when all the value that comprise the average are known (ie, after the last publishing day in June, for a swap that references the average of published prices in June).

Just like swaps, 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 MOPS 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 swaps markets, so long as the swaps analyzed, and the floating price physical contract being valued, use the same Platts reference price for final settlement.

Platts therefore publishes a MOPS 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 swaps market to serve as the basis for analysis. In Singapore, Platts publishes a MOPS strip value for jet fuel, naphtha, gasoil and fuel oil. There is no MOPS strip calculated for products where swaps are not assessed by Platts.

By standing as a hedgable proxy value for the MOPS element of a floating price cargo, the MOPS 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. The MOPS Strip it defines the value of "MOPS" in the assessment formula: "physical value = MOPS plus premium (or discount)."

To fully understand the application of the MOPS strip, it is important to note that Platts' physical price assessments for most Singapore cargoes are based on cargoes loading 15-30 days from the date of the price assessment itself. Hence, if today is May 31, the assessments will reflect the value of cargoes loading during June 15-30.

MOPS strip is the value of the Singapore swaps market, effective for the mid-point date of the physical assessment. In this particular example, the mid-point of the assessed period is notionally June 22.5. This is a specific sample calculation for how the MOPS strip would be calculated:

180 CST High Sulfur Fuel Oil on May 31, 2013 ($/mt)

June (swap): $605.40

July (swap): $600.40

June/July spread: +$5.00 (backwardation)

Physical FOB Singapore 180CST (loading on June15-30): $607.39

Since there are 30.5 days between mid-June (30 days) and mid-July (31 days) – we calculate the daily backwardation value to be +0.1639 (from 5.00/30.5). Since there are seven and a half days between mid-June (June 15) and the mid-point date for physical assessment (June 22.5), the calculated MOPS strip value is:

= $605.40 + (0.1639 x -7.5)

= $604.17

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

Physical premium (or discount) = $607.39 – $604.17

Physical premium (or discount) = $3.22

In a second example, the reverse process also generates a value. If Platts assessed the physical market premium as being MOPS plus $3.22, the following equation could be applied:

Physical assessment = MOPS plus premium (or discount)

Physical assessment = $604.17 + $3.22

Physical assessment = $607.39

PART IV: PLATTS EDITORIAL STANDARDS

All Platts' employees must adhere to the McGraw Hill Financial Code of Business Ethics (COBE), which has to be signed annually. The COBE reflects McGraw Hill Financial's commitment to integrity, honesty and acting in good faith in all its dealings.

In addition, Platts requires that all employees attest annually that they do not have any personal relationships or personal financial interests that may influence or be perceived to influence or interfere with their ability to perform their jobs in an objective, impartial and effective manner.

Market reporters and editors are mandated to ensure adherence to published methodologies as well as internal standards that require accurate records are kept in order to document their work.

Platts has a Quality & Risk Management (QRM) function that is independent of the editorial group. QRM is responsible for ensuring the quality and adherence to Platts' policies, standards, processes and procedures. The QRM team conduct regular assessments of editorial operations, including checks for adherence to published methodologies.

McGraw Hill Financial's internal auditor, an independent group that reports directly to the parent company's board of directors, reviews the Platts' risk assessment programs.

PART V: CORRECTIONS

Platts is committed to promptly correcting any material errors. When corrections are made, they are limited to corrections to data that was available when the index or assessment was calculated.

PART VI: REQUESTS FOR CLARIFICATIONS OF DATA AND COMPLAINTS

Platts strives to provide critical information of the highest standards, to facilitate greater transparency and efficiency in physical commodity markets.

Platts customers raise questions about our methodologies and the approach we take in our price assessments, proposed methodology changes and other editorial decisions in relation to our price assessments. These interactions are strongly valued by Platts and we encourage dialogue concerning any questions a customer or market stakeholder may have.

However, Platts recognizes that occasionally customers may not be satisfied with responses received or the services provided by Platts and wish to escalate matters. Full information about how to contact Platts to request clarification around an assessment, or make a complaint, is available on our website, at: http://www.platts.com/ContactUs/Complaints.

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

The following specifications guide contains the primary specifications and methodologies for Platts refined oil products assessments throughout Asia Pacific and the Middle East. The various components of this guide are designed to give Platts subscribers as much information as possible about a wide range of methodology and specification issues.

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

FOB Singapore Nomination Standards

Platts editorial standards for the Market On Close assessment process for FOB Singapore fuel oil, gasoil, gasoline and jet fuel calls for best practices in all aspects of operational performance, including terminal and vessel nominations. Terminal and vessel nominations are to be done seven days prior to the first day of the five-day loading window for fuel oil, gasoil and jet fuel. Sellers should nominate terminal, while buyers should nominate a single performing vessel and narrow the laycan to three days, subject to terminal acceptance, seven days' prior to the first day of the five-day laycan.

For gasoline, sellers must declare a terminal 10 days prior to the first day of the loading window, and buyers should nominate a single performing vessel seven days prior, with the buyer narrowing the loading window to three days, subject to loading terminal acceptance.

All nominations should typically be communicated to counterparties by 5pm Singapore time.

If the nomination day falls on a weekend or public holiday, nominations should be done on the business day prior to the weekend or public holiday. Buyers may submit multiple vessels for terminal vetting prior to nominating a performing vessel, and buyers may substitute the vessel prior to loading, subject to terminal acceptance.

Platts expects parties to be reasonable when exceptional circumstances require buyers to substitute vessels just prior to loading. Buyers should promptly communicate to sellers and terminals when vessel substitution is required. Sellers should not unreasonably withhold substitutions or hamper the established loading process. If the substituted vessel tendered the notice of readiness in time for loading, sellers should not put buyers on best endeavor basis.

Nomination of "non-commensurate" vessels should not expose the seller to incur additional costs associated with the large-sized vessels. The buyer has the right to nominate a non-commensurate vessel to load a cargo traded via the Singapore MOC assessment process, while the seller has the obligation to accept a commensurate vessel and try to accommodate a non-commensurate vessel if the terminal scheduling permits. The seller's exposure to demurrage and laytime should not exceed the normal associated demurrage and laytime, if a commensurate vessel was nominated.

LPG

Assessment	CODE	Mavg	Pavg	Wavg	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	CURRENCY	UOM	CONV
Propane Refrigerated CFR Japan 30-45 days	AAVAK00	AAVAK03			CFR	Japan	30-45 days	11,000	44,000	US$	Metric Tons	
Propane Refrigerated CFR Japan 45-60 days	AAVAL00	AAVAL03			CFR	Japan	45-60 days	11,000	44,000	US$	Metric Tons	
Propane Refrigerated CFR Japan 60-75 days	AAVAM00	AAVAM03			CFR	Japan	60-75 days	11,000	44,000	US$	Metric Tons	
Propane Refrigerated CFR Japan 30-60 days cargo	PMAAV00	AAAVR00			CFR	Japan	30-60 days	11,000	44,000	US$	Metric Tons	
Propane CFR Japan 30-60 days vs Saudi Propane CP strip 20-40 days	PMAAX00	PMUEI03			CFR	Japan	30-60 days	11,000	44,000	US$	Metric Tons	
Propane CFR Korea 30-60 days vs Saudi Propane CP strip 20-40 days	PMABK00	PMABK03			CFR	South Korea	30-60 days	11,000	44,000	US$	Metric Tons	
Propane Refrigerated CFR South China 20-35 days cargo	AABAK00	AABAM00			CFR	China	20-35 days	11,000	44,000	US$	Metric Tons	
Propane CFR South China 20-35 days vs Saudi Propane CP strip 5-15 days	AABAI00	AABAI03			CFR	China	20-35 days	11,000	44,000	US$	Metric Tons	
Propane Refrigerated CFR Taiwan 20-35 days cargo	AABAN00	AABAQ00			CFR	Taiwan	20-35 days	11,000	44,000	US$	Metric Tons	
Propane CFR Taiwan 20-35 days vs Saudi Propane CP strip 5-15 days	AABAO00	AABAO03			CFR	Taiwan	20-35 days	11,000	44,000	US$	Metric Tons	
Propane Refrigerated CFR North Asia Zone 30-60 days cargo	AAJTQ00	AAJTR00			CFR	Japan/Korea/China/Taiwan	30-60 days	11,000	44,000	US$	Metric Tons	
Propane FOB AG 20-40 days cargo	PMUDM00	PMUDN03			FOB	Arab Gulf	20-40 days	11,000	44,000	US$	Metric Tons	
Propane FOB AG 20-40 days cargo Month to Date	PMUDO00	PMUDP03			FOB	Arab Gulf	20-40 days	11,000	44,000	US$	Metric Tons	
Propane FOB AG 20-40 days cargo vs Propane Saudi CP strip 20-40 days	PMABF00	PMUEJ03			FOB	Arab Gulf	20-40 days	11,000	44,000	US$	Metric Tons	
Propane FOB AG cargo vs Saudi Propane CP M1	AAKZA00	AAKZA03			FOB	Arab Gulf	20-40 days	11,000	44,000	US$	Metric Tons	
Propane Saudi CP strip 20-40 days AG loading to Japan-Korea	AAKZC00	AAKZC03								US$	Metric Tons	

LPG CONTINUED

Assessment	CODE	Mavg	Pavg	Wavg	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	CURRENCY	UOM	CONV
Propane Saudi CP strip 5-15 days AG loading to China-Taiwan	AAKZE00	AAKZE03								US$	Metric Tons	
Propane FOB Saudi Arabia CP	PTAAM10				FOB	Saudi Arabia				US$	Metric Tons	
Butane Refrigerated CFR Japan 30-45 days	AAVAN00	AAVAN03			CFR	Japan	30-45 days	11,000	44,000	US$	Metric Tons	
Butane Refrigerated CFR Japan 45-60 days	AAVAO00	AAVAO03			CFR	Japan	45-60 days	11,000	44,000	US$	Metric Tons	
Butane Refrigerated CFR Japan 60-75 days	AAVAP00	AAVAP03			CFR	Japan	60-75 days	11,000	44,000	US$	Metric Tons	
Butane Refrigerated CFR Japan 30-60 days cargo	PMAAF00	AAAVQ00			CFR	Japan	30-60 days	11,000	44,000	US$	Metric Tons	
Butane CFR Japan 30-60 days vs Saudi Butane CP strip 5-15 days	PMAAH00	PMUEL03			CFR	Japan	30-60 days	11,000	44,000	US$	Metric Tons	
Butane CFR Korea 30-60 days vs Saudi Butane CP strip 20-40 days	PMABL00	PMABL03			CFR	South Korea	30-60 days	11,000	44,000	US$	Metric Tons	
Butane Refrigerated CFR South China 20-35 days cargo	AABAU00	AABAS00			CFR	China	20-35 days	11,000	44,000	US$	Metric Tons	
Butane CFR South China 20-35 days vs Saudi Butane CP strip 5-15 days	AABAT00	AABAT03			CFR	China	20-35 days	11,000	44,000	US$	Metric Tons	
Butane Refrigerated CFR Taiwan 20-35 days cargo	AABBH00	AABBK00			CFR	Taiwan	20-35 days	11,000	44,000	US$	Metric Tons	
Butane CFR Taiwan 20-35 days vs Saudi Butane CP strip 5-15 days	AABBI00	AABBJ00			CFR	Taiwan	20-35 days	11,000	44,000	US$	Metric Tons	
Butane Refrigerated CFR North Asia Zone 30-60 days cargo	AAJTT00	AAJTU00			CFR	Japan/Korea/China/Taiwan	30-60 days	11,000	44,000	US$	Metric Tons	
Butane FOB AG 20-40 days cargo	PMUDR00	PMUDS03			FOB	Arab Gulf	20-40 days	11,000	44,000	US$	Metric Tons	
Butane FOB AG 20-40 days cargo Month to Date	PMUDQ00	PMUDT03			FOB	Arab Gulf	20-40 days	11,000	44,000	US$	Metric Tons	
Butane FOB AG 20-40 days cargo vs Butane Saudi CP strip 20-40 days	PMABG00	PMUEK03				Arab Gulf	20-40 days	11,000	44,000	US$	Metric Tons	
Butane FOB AG cargo vs Saudi Butane CP Mo01	AAKZB00	AAKZB03			FOB	Arab Gulf	20-40 days	11,000	44,000	US$	Metric Tons	
Butane Saudi CP strip 20-40 days AG loading to Japan-Korea	AAKZD00	AAKZD03								US$	Metric Tons	
Butane Saudi CP strip 5-15 days AG loading to China-Taiwan	AAKZF00	AAKZF03								US$	Metric Tons	
Butane FOB Saudi Arabia CP	PTAAF10				FOB	Saudi Arabia				US$	Metric Tons	
LPG Refrigerated 11:11 CFR Singapore-Japan 30-45 days	AASGO00	AASGO03			CFR	Singapore/Japan	30-45 days	22,000	44,000	US$	Metric Tons	
LPG Refrigerated 11:11 CFR Singapore-Japan 45-60 days	AASGP00	AASGP03			CFR	Singapore/Japan	45-60 days	22,000	44,000	US$	Metric Tons	
LPG Refrigerated 11:11 CFR Singapore-Japan 60-75 days	AASGQ00	AASGQ03			CFR	Singapore/Japan	60-75 days	22,000	44,000	US$	Metric Tons	
LPG Refrigerated 11:11 CFR Singapore-Japan 30-60 days cargo	AASGN00	AASGN03			CFR	Singapore/Japan	30-60 days	22,000	44,000	US$	Metric Tons	
LPG Pressurized CFR Philippines 7-15 days	AAWUX00	AAWUX03			CFR	Philippines	7-15 days	1,800	2,500	US$	Metric Tons	
LPG Pressurized CFR Philippines vs Saudi Propane-Butane CP Mo01	AAWUY00	AAWUY03			CFR	Philippines	7-15 days	1,800	2,500	US$	Metric Tons	
LPG Pressurized CFR Vietnam 7-15 days	AAWUV00	AAWUV03			CFR	Vietnam	7-15 days	1,800	2,500	US$	Metric Tons	
LPG Pressurized CFR Vietnam vs Saudi Propane-Butane CP Mo01	AAWUW00	AAWUW03			CFR	Vietnam	7-15 days	1,800	2,500	US$	Metric Tons	
LPG Pressurized FOB East China 7-15 days	AAWUZ00	AAWUZ03			FOB	China	7-15 days	1,800	2,500	US$	Metric Tons	
LPG Pressurized FOB East China vs Saudi Propane-Butane CP Mo01	AAWVA00	AAWVA03			FOB	China	7-15 days	1,800	2,500	US$	Metric Tons	
LPG Pressurized FOB Singapore 7-15 days	AAWVD00	AAWVD03			FOB	Singapore	7-15 days	1,800	2,500	US$	Metric Tons	
LPG Pressurized FOB Singapore vs Saudi Propane-Butane CP Mo01	AAWVE00	AAWVE03			FOB	Singapore	7-15 days	1,800	2,500	US$	Metric Tons	
LPG Pressurized FOB South China 7-15 days	AAWVB00	AAWVB03			FOB	China	7-15 days	1,800	2,500	US$	Metric Tons	
LPG Pressurized FOB South China vs Saudi Propane-Butane CP Mo01	AAWVC00	AAWVC03			FOB	China	7-15 days	1,800	2,500	US$	Metric Tons	

LPG

Platts assesses the value of large cargoes of propane and butane supplied on refrigerated tankers in both the Middle East and the Asia Pacific regions. Additionally, Platts publishes assessments for the small-cargo LPG market in the Asia Pacific, reflecting the value of mixed LPG cargos carried in pressurized ships.

Platts considers outright prices and floating prices in its assessments. Floating price transactions are most commonly based on a premium or discount to Saudi Aramco's monthly export Contract Prices (CPs) for propane and butane.

Platts Asia and Middle East propane and butane assessments reflect specifications that conform to typical specifications issued by Saudi Aramco, including: minimum 95% propane content, maximum 4% butane content and maximum 0.1% olefin content. Butane specifications reflected in Platts assessments conform to typical specifications issued by Saudi Aramco, including: maximum 2% propane content, maximum 29% isobutane content, minimum 68% normal butane content and maximum 0.1% olefin content.

Platts assessments reflect standard terms and conditions for FOB spot transactions lifting from the Arab Gulf and CFR spot transactions into Japan, Korea, South China and Taiwan main ports (see locations). Cost and Freight are typically defined by Incoterms. Platts' assessments reflect transactions based on letter of credit as needed with typically 30-day terms.

Refrigerated LPG: In the refrigerated LPG markets, propane and butane are typically supplied on Very Large Gas Carriers (VLGCs), which are typically 44,000mt, and commonly segregated into four tanks of 11,000 mt each on each ship. Each tank will typically contain wither propane or butane. Platts refrigerated assessments reflect the value of refrigerated propane and refrigerated butane as stand-alone, minimum 11,000mt trade sizes. Multiples of 11,000mt, up to 44,000mt, are considered for assessment and normalized for size as needed. Additionally, Platts also assesses the value of combination refrigerated cargoes where propane and butane are both committed for delivery, typically in evenly split, 22,000mt cargo sizes.

In Asia's delivered markets, Platts assesses cargoes for delivery in three half-month cycles. The cycles generally fall 30-45 days forward, 45-60 days forward and 60-75 days forward on the first day of every roll. Assessments roll forward on the first business day of a new month, and the first business day after the 15th of every month. As an example, from March 1 until March 15, Platts assessments would be for H1 April, H2 April and H1 May — representing 30-45 days, 45-60 days and 60-75 days forward on March 1 itself. On March 16 (or the first publishing day after the 15th), assessment cycles move forward by a half month to become H2 April, H1 May and H2 May. Platts' headline cargo assessment is produced by averaging the first two half-month assessments.

In the Middle East spot LPG market, Platts assesses the outright value of spot cargoes for loading on an FOB basis, 20-40 days after the date of assessment. Platts also publishes an assessment of the premium or discount for spot cargoes loading 20-40 days forward in the Middle East, and spot premiums for cargos loading one month forward. These premiums and discounts reflect the value to be applied to the prevailing Saudi Aramco Contract Price during dates of loading. From September 1, 2014, Platts discontinued assessments of physical market premiums for refrigerated propane and butane cargoes loading in the Middle East LPG market in the second month ahead due to changing market conditions.

Refrigerated freight rate assessments: Platts publishes three assessments for the cost of freight along major shipping routes in the refrigerated LPG markets. These assessments are published in dollars per metric ton, and reflect the cost of shipping refrigerated LPG in VLGCs. Platts surveys the market and reflect spot charter fixtures in the assessments, for cargoes loading 20 or more days after the date of assessment. The three routes assessed are Persian Gulf to Japan, Persian Gulf to South China and Persian Gulf to East China. For the purposes of normalization, "Persian Gulf" reflects the port of Ras Tanura, with spot fixtures for nearby loading locations including Qatar and Bahrain normalized where needed. "Japan" deliveries are normalized to Chiba for freight assessments, while "East China" and "South China" are normalized to Shanghai and Guangzhou/Shenzhen respectively.

FOB AG: Export terminals including Ras Tanura, Saudi Arabia and Yanbu, Saudi Arabia, and any safe port in Qatar

CFR SINGAPORE-JAPAN: Platts' 11:11 refrigerated LPG cargo assessments reflect the value of cargoes delivered to main ports from Singapore to Japan.

CFR JAPAN: Import terminals at main ports including Kashima, Yokkaichi and Oita

CFR KOREA: Import terminals at main ports including Yeosu and Ulsan

CFR SOUTH CHINA/TAIWAN: Import terminals, and floating storage vessels off China main ports including Shenzhen, Zhuhai, Shantou, Mai Liao and Kaohsiung

CFR NORTH ASIA: Average value of CFR Japan and CFR South China assessments

Pressurized LPG: In the pressurized markets, Platts assesses the values of mixed LPG cargos Asia, reflecting a typical mix of 30% propane, 70% butane.

Platts assessments reflect the value of mixed, pressurized LPG cargoes for delivery CFR South China, CFR East China, CFR Vietnam (basis CFR Ho Chi Minh City) and CFR Philippines (basis CFR Bataan). Platts also assesses the value of such cargoes loading from East China (basis FOB Shanghai); South China (basis FOB Shenzhen) and FOB Singapore. These pressurized cargo assessments reflect the value of parcels to be delivered 7-15 days forward from the date of publication. These values are published as outright price assessments. Platts also publishes an assessment for the premium or discount for cargoes relative to the Saudi Aramco Contract Price that prevails at the time the cargo is delivered or loaded.

Pressurized freight rate assessments: Platts publishes five assessments for the cost of freight along significant shipping routes in the Asia Pacific region pressurized LPG markets. These assessments are published in dollars per metric ton, and reflect the cost of shipping pressurized LPG in small tankers typically carrying between 1,000 mt and 3,000 mt of mixed LPG. Platts surveys the market and reflects spot charter fixtures in the assessments, for cargoes loading 7 or more days after the date of assessment. The routes assessed are (1) Thailand to the port of Guangzhou, (2) Thailand to the port of Guanxi, (3) Thailand to the port of Shantou, (4) Japan to the port of Shanghai and (5) Korea to the port of Shanghai. For assessment purposes, "Thailand" loadings are normalized to Map Ta Phut, "Korea" loadings are normalized to Ulsan/Onsan, and "Japan" to the port of Chiba.

Asia Strip: Platts publishes two strip values for the Saudi CP, based on

the official CP for the current month and forward CP values derived from the swaps market. These values provide a marker for the value of CP relative to the CFR delivery dates for Japan/Korea and China/Taiwan.

CFR VIETNAM: Pressurized LPG storage terminals in Vietnam, normalized to Ho Chi Minh City

CFR PHILIPPINES: Pressurized LPG storage terminals in Philippines, normalized to Bataan

FOB EAST CHINA: Pressurized LPG storage terminals in East China, normalized to Shenzhen

FOB SOUTH CHINA: Pressurized LPG storage terminals in South China, normalized to Shenzhen

FOB SINGAPORE: Pressurized LPG storage terminals in Singapore

GASOLINE

Assessment	CODE	Mavg	Pavg	Wavg	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	CURRENCY	UOM	CONV
Gasoline Unl 90 FOB South China	AAICU00	AAICV00			FOB	China	15-30 days	50,000	150,000	US$	Barrels	8.5
Gasoline Unl 91-92 C+F Japan Cargo	PGACW00	PGACW03			C+F	Japan		50,000	150,000	US$	Barrels	8.5
Gasoline Unl 92 FOB Spore Cargo	PGAEY00	PGAEY03			FOB	Singapore	15-30 days	50,000	150,000	US$	Barrels	8.5
Gasoline Unl 92 MOPS strip	AAXEQ00	AAXEQ03				Singapore				US$	Barrels	8.5
Gasoline Unl 92 FOB Spore Cargo vs Gasoline Unl 92 MOPS strip	AAXER00	AAXER03			FOB	Singapore	15-30 days	50,000	150,000	US$	Barrels	8.5
Gasoline Unl 92 FOB Spore Cargo vs Naphtha MOPS strip	AAPKG00	AAPKG03			FOB	Singapore	15-30 days	50,000	150,000	US$	Barrels	8.5
Gasoline Unl 92 FOB Spore Cargo $/mt	AAXNA00	AAXNA03			FOB	Singapore	15-30 days	5,000	20,000	US$	Metric Tons	8.5
Gasoline 92 RON Unl MOP West India $/bbl	AARBP00	AARBP03			FOB	India		50,000	150,000	US$	Barrels	8.5
Gasoline 92 RON Unl MOP West India $/mt	AARBQ00	AARBQ03			FOB	India		5,000	20,000	US$	Metric Tons	8.5
Gasoline Unl 92 C+F Australia Cargo	AACZF00	AACZB00			C+F	Australia		50,000	150,000	US$	Barrels	8.5
Gasoline Unl 93 FOB South China	AAICW00	AAICX00			FOB	China	15-30 days	50,000	150,000	US$	Barrels	8.5
Gasoline Unl 95 FOB Spore Cargo	PGAEZ00	PGAEZ03			FOB	Singapore	15-30 days	50,000	150,000	US$	Barrels	8.5
Gasoline Unl 95 FOB Spore Cargo vs Naphtha MOPS strip	AAPKF00	AAPKF03			FOB	Singapore	15-30 days	50,000	150,000	US$	Barrels	8.5
Gasoline 95 RON Unl MOP West India $/bbl	AAQWH00	AAQWH03			FOB	India		50,000	150,000	US$	Barrels	8.5
Gasoline 95 RON Unl MOP West India $/mt	AAQWI00	AAQWI03			FOB	India		5,000	20,000	US$	Metric Tons	8.5
Gasoline Unl 95 C+F Australia Cargo	AACZH00	AACZG00			C+F	Australia		50,000	150,000	US$	Barrels	8.5
Gasoline Unl 95 C+F Japan Cargo	PGAQQ00	PGAQR03			C+F	Japan		50,000	150,000	US$	Barrels	8.5
Gasoline Unl 95 FOB Korea Cargo	PGAQO00	PGAQP03			FOB	South Korea	15-30 days	50,000	150,000	US$	Barrels	8.5
Gasoline 95 RON Unl CFR Arab Gulf vs MOPAG Gasoline	AAWUK00	AAWUK03			CFR	Arab Gulf	15-45 days	255,000	340,000	US$	Barrels	8.5
Gasoline 95 RON Unl FOB Arab Gulf Jebel Ali Cargo	AAICY00	AAICZ00			FOB	Arab Gulf		255,000	340,000	US$	Barrels	8.5
Gasoline 95 RON Unl FOB Arab Gulf vs MOPAG Gasoline	AAWUJ00	AAWUJ03			FOB	Arab Gulf	15-45 days	255,000	340,000	US$	Barrels	8.5
Gasoline Unl 97 FOB Spore Cargo	PGAMS00	PGAMS03			FOB	Singapore	15-30 days	50,000	150,000	US$	Barrels	8.5
Gasoline Unl 97 FOB Spore Cargo vs Naphtha MOPS strip	AAPKE00	AAPKE03			FOB	Singapore	15-30 days	50,000	150,000	US$	Barrels	8.5

GASOLINE

Singapore gasoline assessments: Platts gasoline assessments on a FOB Singapore basis reflect standard industry specifications, which are summarized in the table in this section. The specifications listed are not comprehensive on all possible specification elements, and cargoes reflected in Platts assessment processes must at all times be deemed to fall within industry standards, including merchantability of the product. Grades which are not widely merchantable -- for instance, gasoline with unusual additives, including MMT and secondary butyl acetate or unusually high quantities of certain additives or blendstocks which are not typical -- will not be reflected in the assessments. Platts is currently considering any addition of SBAC above trace as deeming the gasoline atypical.

Platts confirmed in October 2013 that it would amend the distillation and density specifications for gasoline reflected in its FOB Singapore gasoline 92 RON unleaded, 95 RON unleaded and 97 RON unleaded assessments. The amended specifications took effect from January 1, 2014, and cargoes traded in the Platts Market on Close assessment process from that time should meet the new specification requirements.

Under these changes, Platts raised the minimum T50 distillation temperature threshold for Singapore gasoline assessments to 80 degrees Celsius, from the previous 75 degrees Celsius. Platts also introduced a new minimum density requirement of 0.720 g/ml. These changes reflected evolving quality standards in Singapore, where gasoline trading reflects supply and demand across the Asia Pacific and Middle East regions. In particular, the new specification enhanced the ability of gasoline meeting Platts' FOB Singapore 92 RON specifications to be blended to meet Indonesia's import specifications for 88 RON gasoline, while still maintaining its marketability in other key regional markets. Exports of 88 RON gasoline to Indonesia accounted for 33% of the gross gasoline outflow FOB Singapore in the first eight months of 2013.

FOB Singapore gasoline specifications

Property	Standard
Research Octane Number (RON)	Min 92.0, Min 95.0, Min 97.0
Lead content, gpb/l	Max 0.013
Density at 15 deg C, g/ml	0.720
Reid Vapor Pressure (PSI)	Max 10.0
Distillation, degree C	
Initial Boiling Point	Report
10% evaporated	Max 74
50% evaporated	Max 127, Min 80
90% evaporated	Max 190
Final Boiling Point	Max 225
Residue, % vol	Max 2.0
Loss, % vol	Max 2.0
Odor	Marketable
Existent gum, mg/100ml	Max 4.0
Benzene content, % vol	Max 5.0
Sulfur, % wt	Max 0.05
Doctor test	Negative
or Mercaptan sulfur, ppm	Max 15
Mercaptan sulfur, % wt	Max 0.0015
Copper corrosion (3 hours at 50 deg C)	Max 1.0
Induction period, minutes	Min 240
Oxygenates content, % vol	Max 14.0 (of which maximum MTBE content of 10.0)
Aromatics, % vol	Report
Color Undyed	Undyed, light yellow
Alcohol	No additions of any alcohol
Metallic additives	None added
Acetone	Max 100 ppm

Transactions, bids and offers of a minimum of 50,000 barrels are considered for assessment. The maximum cargo size for any one bid or offer is 150,000 barrels. These assessments assessment reflect gasoline for loading 15 to 30 days from the date of publication. Market participants should specify loading for a five-day date range at the time of providing a bid or offer for publication in the Platts assessment process.

China gasoline assessments: Platts gasoline assessments reflect cargoes for loading FOB South China. Assessments reflect 25,000-30,000 mt cargoes. This market typically trades at a differential to naphtha or to Singapore 92 RON unleaded assessments. Platts' China assessments are expressed in USD/mt, using a conversion factor of 8.5.

South Korea gasoline assessments: Platts assesses 95 RON unleaded FOB Korea. This market typically trades on a naphtha related basis.

Japan gasoline assessments: Platts 91-92 RON unleaded gasoline, for delivery on a C+F Chiba basis, is assessed as a netforward into Japan, using the FOB Singapore 92 RON unleaded gasoline as a base. A freight rate for 30,000mt tankers is used. The freight amount is divided by 8.5 and added to the Singapore base assessment.

Platts 95 RON unleaded C+F Chiba assessment is determined by assessing the gasoline market delivered into the Chiba region in Japan. This market typically trades at a differential to naphtha.

Australia gasoline assessments: Platts assesses Australian 92 and 95 RON unleaded on a C+F Melbourne/Sydney basis. These assessments are determined on a netforward basis from FOB Singapore 92 and 95 RON unleaded assessments using a freight rate for 30,000mt tankers. Freight rates are published daily in Platts Clean Tankerwire. See "Platts Netback Methodology in Asia and the Middle East," at the end of this document, for more information on how these values are calculated.

India gasoline assessments: Platts launched its Mean of Platts West India Netbacks on June 1, 2009. The MOPWIN assessment for 92 and 95 octane gasoline is derived by deducting freight costs from the assessments for the same products in Singapore. Although West India has a surplus of oil products for export, there remains only a sporadic flow of spot cargoes and insufficient local price formation to support independent spot prices on FOB West India basis. Platts therefore launched direct freight netbacks from the active trading hubs of Singapore and Japan, where daily prices are established from transparent and firm bids, offers and transactions between many active buyers and sellers. West Coast India – Singapore clean freight assessments used for generating the netback values can be found on Platts Global Alert.

Middle East gasoline assessments: Platts' benchmark gasoline netback assessment is for 95 RON unleaded gasoline on an FOB Arab Gulf basis. These assessments are determined on a netback basis from FOB Singapore 95 RON unleaded assessments using a freight rate for 30,000mt tankers. Freight rates are published daily in Platts Clean Tankerwire. See "Platts Netback Methodology in Asia and the Middle East," at the end of this document, for more information on how these values are calculated.

In July 2008, Platts launched FOB and CFR assessments for the spot market value of gasoline cargoes loading in the Middle East. These assessments, which are published as a spot market premium/discount to Platts' existing 95 octane Middle East netback assessment, reflect the value of 95 octane gasoline cargoes, typically 30,000-40,000mt each, for loading or delivery 15 to 45 days forward from the date of assessment.

Cargoes loading from all Gulf ports are considered for inclusion in the FOB assessment, with prices normalized to loadings in Fujairah and Jebel Ali. Cargoes traded for delivery to all Gulf ports are considered for the CFR assessment, with prices normalized to Bandar Abbas.

NAPHTHA

Assessment	CODE	Mavg	Pavg	Wavg	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	CURRENCY	UOM	CONV
Naphtha C+F Japan Cargo 30-45 Days	PAAAE00	PAAAE03			C+F	Japan	30-45 days	25,000		US$	Metric Tons	9
Naphtha C+F Japan Cargo 45-60 Days	PAAAF00	PAAAF03			C+F	Japan	45-60 days	25,000		US$	Metric Tons	9
Naphtha C+F Japan Cargo 60-75 Day	PAAAG00	PAAAG03			C+F	Japan	60-75 days	25,000		US$	Metric Tons	9
Naphtha C+F Japan Cargo	PAAAD00	PAAAD03			C+F	Japan	45-75 days	25,000		US$	Metric Tons	9
Naphtha MOPJ strip C+F JAPAN ($/mt)	AAXFH00	AAXFH03				Japan				US$	Metric Tons	9
Naphtha C+F Japan vs Naphtha MOPJ strip	AAXFI00	AAXFI03			C+F	Japan	45-75 days	25,000		US$	Metric Tons	9
Naphtha C+F Japan Premium/Discount	PAADI00	PAADJ03			C+F	Japan	30-60 days	25,000		US$	Metric Tons	9
Naphtha C+F Korea Cargo	PAADE00	PAADF03			C+F	South Korea	30-60 days	25,000		US$	Metric Tons	9
Naphtha C+F Korea Cargo Premium/Discount	PAADG00	PAADH03			C+F	South Korea	30-60 days	25,000		US$	Metric Tons	9
Naphtha FOB Arab Gulf Cargo	PAAAA00	PAAAA03			FOB	Arab Gulf	15-30 days	55,000		US$	Metric Tons	9
Naphtha FOB Arab Gulf vs MOPAG Naphtha	AAPKH00	AAPKH03			FOB	Arab Gulf	15-30 days	55,000		US$	Metric Tons	9
Naphtha FOB Singapore Cargo	PAAAP00	PAAAP03			FOB	Singapore	15-30 days	100,000	250,000	US$	Barrels	9
Naphtha FOB Singapore Spot Cargo	AAOVE00	AAOVE03			FOB	Singapore	15-30 days	100,000	250,000	US$	Barrels	9
Naphtha MOPS strip	AAPKA00	AAPKA03				Singapore				US$	Metric Tons	9
Naphtha FOB Spore Export vs Naphtha MOPS strip	PAADC00	AAFDE00			FOB	Singapore	15-30 days	100,000	250,000	US$	Barrels	9
Naphtha LR2 FOB Arab Gulf Cargo	AAIDA00	AAIDB00			FOB	Arab Gulf	15-30 days	75,000		US$	Metric Tons	9
Naphtha MOP West India $/bbl	AAQWJ00	AAQWJ03			FOB	India				US$	Metric Tons	9
Naphtha MOP West India $/mt	AAQWK00	AAQWK03			FOB	India				US$	Metric Tons	9

NAPHTHA

Japan naphtha: Platts assesses the value of naphtha for delivery on a C+F basis into Japan, reflecting three major half-month time cycles, and an additional single "cargo" value reflecting two of these cycles. The three half-month cycles assessed are generally: 30-45 days forward; 45-60 days forward and 60-75 days forward. These assessments are rolled over on the 1st and 16th of each month. For example, on April 1, Platts assesses (1) Second half May; (2) First half June and (3) Second half June. These assessments would be rolled over on April 16. They would then read as (1) First half June; (2) Second half June and (3) First half July.

The main cargo assessment for Japan (Mean of Platts Japan, or MOPJ) reflects the lows and the highs of the second and third published cycles. This maintains a consistency in the rollovers and sets the benchmark as a 45-75 day market.

Platts also assesses a spot premium or discount to reflect the value of cargoes delivered into Japan. The differential reflects the delivery of 25,000 mt cargoes in the first and second CFR Japan cycles, and is expressed as a differential against MOPJ.

Middle East naphtha: Because of general lack of outright transactions, Platts' benchmark Middle Eastern assessments are established as a freight netback. The FOB Arab Gulf assessments (for both 55,000mt (Naphtha) and 75,000mt (Naphtha LR2), are assessed as freight netbacks from MOPJ. Platts uses its daily assessments of the freight market (published in the Platts Clean Tankerwire) to determine the netback. See "Platts Netback Methodology in Asia and the Middle East," at the end of this document, for more information on how these values are calculated.

Platts also assesses a spot premium or discount to reflect the value of cargoes of typically 80,000mt bought and sold in the Middle East market itself. This differential is to be applied against the 55,000mt, FOB AG naphtha netback from MOPJ. Platts considers bids, offers, transactions, and reports of transactions when assessing this local spot market differential.

India naphtha: Platts launched its Mean of Platts West India Netbacks on June 1, 2009. The MOPWIN assessment for naphtha is derived by deducting freight costs from the assessments for the same product in Japan. Although West India has a surplus of oil products for export, there remains only a sporadic flow of spot cargoes and insufficient local price formation to support independent spot prices on FOB West India basis. Platts therefore launched direct freight netbacks from the active trading hubs of Singapore and Japan, where daily prices are established from transparent and firm bids, offers and transactions between many active buyers and sellers. West Coast India – Singapore clean freight assessments used for generating the netback values can be found in the Platts Clean Tankerwire.

Platts CFR Japan naphtha specs

Paraffins	Min 65%
Specific gravity at 60 deg F	0.65-0.74 g/m
RVP	Max 13 psi
Sulfur	Max 650 ppm
Initial boiling point	Min +25 deg C
Final boiling point	Max 204 deg C
Chlorine content	Max 1ppm
Mercury	Max 1 ppb
Arsenic	Max 20 ppb
Olefins	Max 1%
N-paraffins	Min 30%
Colour	Min +20 saybolt
Lead	Max 150 ppb
Oxygenates	Max 50 ppm TAME, MTBE and/or ETBE

Singapore naphtha: Platts publishes two naphtha assessments for Singapore: a simple netback value from Japan, and an assessment that reflects spot market values in Singapore.

Spot Naphtha (Singapore): Most spot market deals in Singapore are done on a floating basis, although at times fixed-price activity is observed. Both floating and outright prices in Singapore are reflected in the spot naphtha assessment. The Singapore naphtha assessment typically follows prices prevailing in other large consuming markets such as Japan and Korea, minus an assessed freight rate. The Singapore assessment price therefore has a "floor" established by those importing centers.

The Platts spot premium assessment includes fixed-price deals, fixed-price bids and offers and floating transactions of a minimum of 100,000 barrels and up to 250,000 barrels loading in one berth in its spot Singapore assessment. In all these calculations, the gravity of the naphtha is a critical issue as most end users are concerned with the price of their commodities, which are valued on a weight basis. Platts has traditionally used a conversion factor in its calculation of 9 barrels per metric ton. This reflects the stated 0.65 to 0.74 gravity as per our guide for specifications.

Naphtha (Singapore): The benchmark FOB Singapore naphtha assessment is established using a freight netback from Japan. Platts converts the naphtha assessed in Japan in dollars per tonne to dollars per barrel. The conversion is done using a 9 barrels per metric ton factor. The calculation is as follows:

((First published cycle in Japan minus Singapore-Japan freight)/9) -$0.05 /barrel

The assessed freight is for a medium range vessel of 30,000 mt. Port charges, otherwise imposed in Japan, are deducted in the FOB Singapore naphtha assessment and are set at 5 cents per barrel.

Please also note that the implicit contango or backwardation between the cycles is also taken into account.

Platts FOB Singapore naphtha assessments are for 15-30 days from publication on a rolling basis.

Thus on April 20, Platts would be assessing May 5 through May 20.

In a typical example:

As for April 15:

Price in Japan: 1349.00-1349.50 (2nd half May)

Less freight: 30.000

FOB Singapore: 1319.25

Barrel basis: 146.58

Less costs: 146.53 or 146.50-146.55

On the day of the rollover of the cycles in Japan, that is, on the 1st and the 16th of the month, the FOB Singapore assessment will absorb the backwardation or contango of the lapsed cycle in Japan for five days inclusive of Saturday and Sunday. For example, on April 16, the contango between second half May and first half June is $0.25/mt and remains constant throughout the five days. Platts factors in this contango on declining scale until April 20:

Day of month:	1st	2nd	3rd	4th	5th	6th onwards
Day of month:	16th	17th	18th	19th	20th	21st onwards
	100%	80%	60%	40%	20%	0

JET FUEL

Assessment	CODE	Mavg	Pavg	Wavg	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	CURRENCY	UOM	CONV
Jet Kero FOB Spore Cargo	PJABF00	PJABF03			FOB	Singapore	15-30 days	100,000	250,000	US $	Barrels	7.9
Jet Kero MOPS strip	AAPJZ00	AAPJZ03								US $	Barrels	7.9
Jet Kero FOB Spore vs Jet Kero MOPS strip	PJACU00	AAFDB00			FOB	Singapore	15-30 days	100,000	250,000	US $	Barrels	7.9
Jet Kero MOP West India $/bbl	AAQWL00	AAQWL03			FOB	India		100,000	250,000	US $	Barrels	7.9
Jet Kero MOP West India $/mt	AAQWM00	AAQWM03			FOB	India		10,000	30,000	US $	Metric Tons	7.9
Jet Kero C+F Australia Cargo	AAFIY00	AAFIZ00			C+F	Australia		100,000	250,000	US $	Barrels	7.9
Jet Kero C+F Japan Cargo	PJAAN00	PJAAN03			C+F	Japan		100,000	250,000	US $	Barrels	7.9
Jet Kero C+F Japan Cargo vs Jet Kero MOPS strip	PAADK00	PAADL03			C+F	Japan		100,000	250,000	US $	Barrels	7.9
Jet Kero FOB Korea Cargo	PJADG00	PJADH03			FOB	South Korea	15-30 days	100,000	250,000	US $	Barrels	7.9
Jet Kero FOB Korea Cargo vs Jet Kero MOPS strip	PJADI00	PJADJ03			FOB	South Korea	15-30 days	100,000	250,000	US $	Barrels	7.9
Jet Kero C+F South China Cargo	PJABQ00	PJABQ03			C+F	China		10,000	30,000	US $	Metric Tons	7.9
Jet Kero C+F South China Cargo vs Jet Kero MOPS strip	AAWTW00	AAWTW03			C+F	China		10,000	30,000	US $	Metric Tons	7.9
Jet Kero FOB Arab Gulf Cargo	PJAAA00	PJAAA03			FOB	Arab Gulf		100,000	250,000	US $	Barrels	7.9
Jet Kero FOB ArabGulf vs MOPAG Jet Kero	PJACV00	AAFDF00			FOB	Arab Gulf	15-30 days	100,000	250,000	US $	Barrels	7.9
Jet Kero LR2 FOB Arab Gulf Cargo	AAKNZ00	AAKOA00			FOB	Arab Gulf		100,000	250,000	US $	Barrels	7.9

JET FUEL

All Platts Asia and Middle East jet fuel assessments reflect standard commercial Jet-A1 specifications, as defined by UK Ministry of Defence in DEFSTAN 91-91, unless otherwise stated.

Singapore jet fuel: Specific gravity is typically 0.8 g/m. Singapore smoke point is typically 19-21, and premiums may be paid for higher smoke point and discounts for lower smoke point. Color specification for FOB Singapore cargoes reflects a minimum of 18 Saybolt color guarantee.

The Singapore physical assessment reflects transactions, bids and offers of a minimum of 100,000 barrels, maximum 250,000 b, loading 15-30 days from date of publication. Market participants should specify loading for a five-day date range at the time of submitting a bid or offer for publication.

The FOB Singapore premium/discount assessment takes into account physical cargo activities 15 to 30 days from date of publication.

Jet Swaps: The Singapore jet swap assessment reflects a minimum trade size of 50,000 barrels each. Assessments for paper are for one and two months forward and are assessed on a full calendar month basis. As an example, during the month of February, Platts would assess paper for March and for April. Paper jet kerosene is a non-deliverable contract.

Middle East jet fuel: FOB Arab Gulf is assessed on a netback basis from the benchmark FOB Singapore assessment using 55,000mt and 80,000mt (LR2) ship freight rates. Freight rates reported in the Platts Clean Tankerwire are used. It may also be assessed independently depending on spot cargo movement and competing barrels from other areas. See "Platts Netback Methodology in Asia and the Middle East," at the end of this document, for more information on how these values are calculated.

India jet fuel: Platts launched its Mean of Platts West India Netbacks on June 1, 2009. The MOPWIN assessment for jet is derived by deducting freight costs from the assessments for the same product in Singapore. Although West India has a surplus of oil products for export, there remains only a sporadic flow of spot cargoes and insufficient local price formation to support independent spot prices on FOB West India basis. Platts therefore launched direct freight netbacks from the active trading hubs of Singapore and Japan, where daily prices are established from transparent and firm bids, offers and transactions between many active buyers and sellers. West Coast India – Singapore clean freight assessments used for generating the netback values can be found in the Platts Clean Tankerwire.

Japan jet fuel: Color typically sold into Japan is around 20-21. Platts surveys the market to determine the tradable levels for delivered medium ranges vessels with the assessment made for C+F Chiba Japan. Most cargoes trade on a Mean of Platts Singapore (MOPS) basis plus a differential.

South Korea jet fuel: Korea jet fuel is assessed on a FOB Korea basis, reflecting cargoes for loading 15-30 days forward from the date of publication. Most cargoes trade on a Mean of Platts Singapore (MOPS) basis plus a differential.

China jet fuel: China jet fuel is assessed on a C+F basis main ports including Qing Huang Dao, Shanghai and Huangpu. Assessments reflect medium range vessels ranging from 25-45,000 mt each. Cargoes reflect saybolt color of minimum 20. Cargoes typically trade based on the mean of Platts Singapore (MOPS.)

Australia jet fuel: Australian jet fuel is assessed on a C+F Sydney/ Melbourne basis, for medium range vessels. The assessments are based on Singapore plus applicable freight. See "Platts Netback Methodology in Asia and the Middle East," at the end of this document, for more information on how these values are calculated.

GASOIL

Assessment	CODE	Mavg	Pavg	Wavg	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	CURRENCY	UOM	CONV
Gasoil FOB Spore Cargo	POABC00	POABC03			FOB	Singapore	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil FOB Spore Cargo sulfur ppm	POABCSF				FOB	Singapore				US$	Barrels	NA
Gasoil MOPS strip	AAPJY00	AAPJY03				Singapore				US$	Barrels	7.45
Gasoil MOPS strip sulfur ppm	AAPJYSF					Singapore				US$	Barrels	NA
Gasoil FOB Spore Cargo vs Gasoil MOPS strip	POAIC00	AAFDC00			FOB	Singapore	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil FOB Spore Cargo vs Gasoil MOPS strip sulfur ppm	POAICSF				FOB	Singapore				US$	Barrels	NA
Gasoil .001% S (10ppm) FOB Spore Cargo	AAOVC00	AAOVC03			FOB	Singapore	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil .001% S (10ppm) FOB Spore vs Gasoil MOPS strip	AAOVD00	AAOVD03			FOB	Singapore	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil .001% S (10ppm) FOB Spore Cargo vs Gasoil .05% S (500ppm) MOPS strip	CSGAB00				FOB	Singapore	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil .001% (10ppm) MOP West India $/bbl	AAQWN00	AAQWN03			FOB	India		150,000	250,000	US$	Barrels	7.45
Gasoil .001% (10ppm) MOP West India $/mt	AAQWO00	AAQWO03			FOB	India		150,000	250,000	US$	Barrels	7.45
Gasoil .001% S (10ppm) CFR Australia Cargo	AAQUD00	AAQUD03			FOB	Australia		150,000	250,000	US$	Barrels	7.45
Gasoil .005% S (50ppm) FOB Spore Cargo	AAPPF00	AAPPF03			FOB	Singapore	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil .005% S (50ppm) FOB Spore Cargo vs Gasoil MOPS strip	AAPPH00	AAPPH03			FOB	Singapore	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil .005% S (50ppm) FOB Spore Cargo vs Gasoil .05% S (500ppm) MOPS strip	CSGAC00				FOB	Singapore	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil .005% (50ppm) FOB Arab Gulf Cargo	AASGJ00	AASGJ03			FOB	Arab Gulf		150,000	250,000	US$	Barrels	7.45
Gasoil .005% (50ppm) FOB Arab Gulf vs MOPAG Gasoil	AASGK00	AASGK03			FOB	Arab Gulf	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil .05% (500ppm) FOB Arab Gulf Cargo	AAFEZ00	AAFFG00			FOB	Arab Gulf		150,000	250,000	US$	Barrels	7.45
Gasoil .05% (500ppm) FOB Arab Gulf vs MOPAG Gasoil	AAFFD00	AAFFE00			FOB	Arab Gulf	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil .05% (500ppm) MOP West India $/bbl	AAQWP00	AAQWP03			FOB	India		150,000	250,000	US$	Barrels	7.45
Gasoil .05% (500ppm) MOP West India $/mt	AAQWQ00	AAQWQ03			FOB	India		150,000	250,000	US$	Barrels	7.45
Gasoil .05% S (500ppm) FOB Spore Cargo	AAFEX00	AAFEY00			FOB	Singapore	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil .05% S (500ppm) FOB Spore Cargo vs Gasoil .05% S (500ppm) MOPS strip	CSGAD00				FOB	Singapore	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil .05% S (500ppm) FOB Spore Cargo vs Gasoil MOPS strip	AAFFB00	AAFFC00			FOB	Singapore	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil .05% S (500ppm) MOPS strip	CSGAA00					Singapore				US$	Barrels	7.45
Gasoil .20% S (2000ppm) C+F South China Cargo	AALEK00	AALEL00			C+F	China		10,000	30,000	US$	Metric Tons	7.45
Gasoil .25% (2500ppm) FOB Arab Gulf Cargo	AACUA00	AACUB00			FOB	Arab Gulf		150,000	250,000	US$	Barrels	7.45
Gasoil .25% (2500ppm) FOB Arab Gulf vs MOPAG Gasoil	AACUC00	AACUD00			FOB	Arab Gulf	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil .25% (2500ppm) MOP West India $/bbl	AAQWR00	AAQWR03			FOB	India		150,000	250,000	US$	Barrels	7.45
Gasoil .25% (2500ppm) MOP West India $/mt	AAQWS00	AAQWS03			FOB	India		150,000	250,000	US$	Barrels	7.45
Gasoil .25% S (2500ppm) FOB Spore Cargo	AACUE00	AACUF00			FOB	Singapore	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil .25% S (2500ppm) FOB Spore Cargo $/mt	AAXNB00	AAXNB03			FOB	Singapore	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil .25% S (2500ppm) FOB Spore Cargo vs Gasoil .05% S (500ppm) MOPS strip	CSGAE00				FOB	Singapore	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil .25% S (2500ppm) FOB Spore Cargo vs Gasoil MOPS strip	AACQI00	AACTZ00			FOB	Singapore	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil C+F Japan Cargo	POABF00	POABF03			C+F	Japan		150,000	250,000	US$	Barrels	7.45

GASOIL CONTINUED

Assessment	CODE	Mavg	Pavg	Wavg	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	CURRENCY	UOM	CONV
Gasoil C+F Japan Cargo sulfur ppm	POABFSF				C+F	Japan				US$	Barrels	NA
Gasoil C+F Japan Cargo vs Gasoil MOPS strip	AAWVG00	AAWVG03			C+F	Japan		150,000	250,000	US$	Barrels	7.45
Gasoil FOB Arab Gulf Cargo	POAAT00	POAAT03			FOB	Arab Gulf		150,000	250,000	US$	Barrels	7.45
Gasoil FOB Arab Gulf Cargo sulfur ppm	POAATSF				FOB	Arab Gulf				US$	Barrels	NA
Gasoil FOB Arab Gulf vs MOPAG Gasoil	POAID00	AAFDG00			FOB	Arab Gulf	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil FOB Arab Gulf vs MOPAG Gasoil sulfur ppm	POAIDSF				FOB	Arab Gulf	15-30 days			US$	Barrels	NA
Gasoil LR2 FOB Arab Gulf Cargo	AAKBT00	AAKBU00			FOB	Arab Gulf		150,000	250,000	US$	Barrels	7.45
Gasoil LR2 FOB Arab Gulf Cargo sulfur ppm	AAKBTSF				FOB	Arab Gulf	15-30 days			US$	Barrels	NA
Gasoil FOB Korea Cargo	POAIE00	POAIF03			FOB	South Korea	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil FOB Korea Cargo sulfur ppm	POAIESF				FOB	South Korea				US$	Barrels	NA
Gasoil FOB Korea Cargo vs Gasoil MOPS strip	POAIG00	POAIH03			FOB	South Korea	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil FOB Korea Cargo vs Gasoil MOPS strip sulfur ppm	POAIGSF				FOB	South Korea	15-30 days			US$	Barrels	NA
Gasoil FOB Okinawa Cargo	POAIW00	POAIX03			FOB	Japan	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil FOB Okinawa Cargo sulfur ppm	POAIWSF				FOB	Japan				US$	Barrels	NA
Gasoil FOB Okinawa Cargo vs Gasoil MOPS strip	POAIY00	POAIZ03			FOB	Japan	15-30 days	150,000	250,000	US$	Barrels	7.45
Gasoil FOB Okinawa Cargo vs Gasoil MOPS strip sulfur ppm	POAIYSF				FOB	Japan	15-30 days			US$	Barrels	NA
Gasoil FOB Guangzhou Weekly	AAPKV00				FOB	China		150,000	250,000	US$	Barrels	7.45
Gasoil LP C+F South China Cargo	POAFA00	POAFA03			C+F	China		10,000	30,000	US$	Metric Tons	7.45
Gasoil LP C+F South China Cargo sulfur ppm	POAFASF				C+F	China				US$	Metric Tons	NA
Gasoil LP C+F South China Cargo vs Gasoil MOPS strip	AABJZ00	AABKA00			C+F	China		10,000	30,000	US$	Metric Tons	7.45
Gasoil LP C+F South China Cargo vs Gasoil MOPS strip sulfur ppm	AABJZSF				C+F	China				US$	Metric Tons	NA

GASOIL

Gasoil (Singapore): Platts' Singapore physical gasoil assessments reflect a minimum of 150,000 barrels, maximum 250,000 barrels, loading 15-30 days from the date of publication. Market participants should specify loading for a five-day date range at the time of submitting a bid of offer for publication in the assessment process.

On July 15, 2011, Platts announced that it would rename its flagship Singapore "0.5%S Gasoil" assessment on January 3, 2012 as Singapore "Gasoil." The renaming will facilitate gradual transition of the Asian gasoil benchmark to lower sulfur specifications over the coming years, reflecting changing supply and demand trends across the region. On November 22, 2011, Platts confirmed that it planned to amend the sulfur content specified for the flagship Singapore Gasoil assessment to 500 ppm from the current 0.5% (5,000 ppm) with effect from January 2, 2013. At the same time, Platts lowered the sulfur specification of its flagship Arab Gulf Gasoil netback assessment to 500 ppm. The lower sulfur specifications reflect changing supply and demand trends across the regions. Platts anticipates providing ample notice of any further changes to the sulfur reflected in these benchmarks, and launching a full market consultation, should markets evolve towards lower sulfur standards in the future.

Platts' benchmark gasoil assessments for Singapore and the Middle East therefore currently reflect gasoil containing no more than 500 ppm (0.05%) sulfur. Platts continues to publish separate assessments, in both locations, that are labelled as "Gasoil 0.05% sulfur". This is to ensure that Platts can maintain a consistent series of assessment data for gasoil containing no more than 500 ppm sulfur in the regions, even if Platts reduces the sulfur reflected in the primary benchmarks at a future date. Platts primary gasoil assessments are in the meantime identical to those labelled as "Gasoil 0.05% sulfur".

Following industry feedback and engagement, Platts announced on September 28, 2011 that it amended the flash point reflected in its specifications for Asian 10 ppm gasoil assessments. To bring the assessments in line with all other gasoil grades assessed on an FOB Singapore basis, the minimum flash point for the assessments has been raised to 66 degrees Celsius, with effect from April 1, 2012.. The change affected 10 ppm gasoil assessments for FOB Singapore, FOB West India and C+F Sydney/Melbourne.

Grades which are not widely merchantable -- for instance, gasoil with contaminants that are banned in certain major importing countries, including fatty acid methyl esters (FAME) -- will not be reflected in the assessments. Platts understands that Indonesia, Australia, Japan and Sri Lanka all restrict FAME content in gasoil imports to "nil".

Gasoil 10 ppm: Minimum of 150,000 barrels, maximum 250,000 barrels, loading 15-30 days from the date of publication. Specifications as defined in table.

Gasoil 50 ppm: Minimum of 150,000 barrels, maximum 250,000 barrels, loading 15-30 days from the date of publication. Specifications as defined in table.

Gasoil 0.05% sulfur: Minimum of 150,000 barrels, maximum 250,000 barrels, loading 15-30 days from the date of publication. Specifications as defined in table.

Gasoil 0.25% sulfur: Minimum of 150,000 barrels, maximum 250,000 barrels, loading 15-30 days from the date of publication. Specifications as defined in table.

EFS: Platts started publishing the value of the Exchange of Futures for Swaps from May 18, 2009. EFS contracts measure the difference in value between ICE's European gasoil futures contract and Singapore gasoil swaps that are settled using Platts' physical gasoil assessments. Both ICE futures and the EFS itself are expressed in dollars per metric ton. EFS assessments are provided for the prompt three calendar months. So on June 1, Platts would assess June, July and August gasoil futures; Platts would also publish a balance June, July and August EFS. Platts would no longer list the balance month EFS after the 15th of the month, when balance month swaps are no longer assessed. Platts assesses futures until they expire on the exchange. Platts' valuation of futures contracts at the close of trading in Singapore represents Platts' assessment of each contracts value based upon bids, offers and trades on the exchange at precisely 16:30:00:99.

China gasoil: The minimum volume assessed is 100,000 barrels or 10,000-15,000mt. The sulfur content of the gasoil cargoes assessed for delivery into China is 0.05 % and 0.20% maximum. Ports are South China-Huangpu, Hong Kong, Shenzhen. Deals into other areas are tracked but prices are different. Gasoil into North China may command a higher price due to geographical location. Assessment window is 15-30 days from date of publication.

Japan gasoil: Japan gasoil is assessed on a FOB Japan basis reflecting cargoes with 500 ppm sulfur maximum. C+F Japan gasoil reflects cargoes with 10ppm sulfur maximum in line with motor fuel specifications in the country. Platts amended the specification of the C+F Japan assessment with effect from September 1, 2014, from the previous 50ppm sulfur level. Platts surveys the market to determine the tradable levels for cargoes loading/delivering 15-30 days forward. Most cargoes trade on a Mean of Platts Singapore (MOPS) basis plus a differential.

South Korea gasoil: Korea gasoil is assessed on a FOB Korea basis reflecting a 500 ppm sulfur maximum grade. Platts surveys the market to determine the tradable levels for cargoes loading 15-30 days forward.

Middle East gasoil: FOB Arab Gulf gasoil reflects gasoil with a maximum of 500 ppm sulfur, and is assessed as a netback to the Singapore Gasoil assessment, using 55,000mt and 80,000mt (LR2) freight rates. Freight rates reported in the Platts Clean Tankerwire are used for this netback. See "Platts Netback Methodology in Asia and the Middle East," at the end of this document, for more information on how these values are calculated. The FOB Arab Gulf 0.25% sulfur, 0.05% sulfur and 0.005% sulfur assessments are derived by applying assessed spot premiums for those grades to the primary Gasoil assessment, minus the spot premium for standard 500ppm gasoil itself.

Gasoil 0.005% sulfur (outright): Derived by applying spot premium assessed for 0.005% sulfur to the primary FOB AG Gasoil netback, minus the assessed spot premium for standard 500ppm gasoil itself.

Gasoil 0.05% sulfur (outright): Derived by applying spot premium assessed for 0.05% sulfur to the primary FOB AG Gasoil netback, minus the assessed spot premium for standard 500ppm gasoil itself.

Gasoil 0.25% sulfur (outright): Derived by applying spot premium assessed for 0.25% sulfur to the primary FOB AG Gasoil netback, minus the assessed spot premium for standard 500ppm gasoil itself.

Middle East gasoil spot premiums: Platts assesses spot premiums for gasoil, which reflects prevailing premiums applied in the spot market for gasoil bought and sold in reference to the benchmark FOB Arab Gulf netback value.

Gasoil 0.005% sulfur (premium): Loading 15 to 30 days from date of publication.

Gasoil 0.05% sulfur (premium): Loading 15 to 30 days from date of publication.

Gasoil 0.25% sulfur (premium): Loading 15 to 30 days from date of publication.

India gasoil: Platts launched its Mean of Platts West India Netbacks on June 1, 2009. The MOPWIN assessments for 10ppm, 500ppm and 0.25% sulfur gasoil are derived by deducting freight costs from the assessments for the same product in Singapore. Although West India has a surplus of oil products for export, there remains only a sporadic flow of spot cargoes and insufficient local price formation to support independent spot prices on FOB West India basis. Platts therefore launched direct freight netbacks from the active trading hubs of Singapore and Japan, where daily prices are established from transparent and firm bids, offers and transactions between many active buyers and sellers. West Coast India – Singapore clean freight assessments used for generating the netback values can be found in the Platts Clean Tankerwire.

Australia gasoil: Platts assesses 10ppm gasoil on a C+F Sydney/Melbourne basis, in US dollars per barrel. The assessment reflects cargoes for medium range vessels. The assessments are based on Singapore plus applicable freight. See "Platts Netback Methodology in Asia and the Middle East," at the end of this document, for more information on how these values are calculated.

FOB Singapore gasoil / diesel specifications

				0.001%S	0.005%S	0.05%S	0.25%S	
			Unit	10 ppm	50 ppm	500 ppm	2500 ppm	Test Methods
Acid Number, Total		Max	mg KOH/g	0.3	0.5	0.5	0.5	ASTM D664
Appearance @ 25°C	Pass Procedure 1		Visual test	Clear & bright, without undissolved sediment or free water	Clear & bright, without undissolved sediment or free water	Clear & bright, without undissolved sediment or free water		ASTM D4176 Proc 2
Ash content		Max	% weight	0.01	0.01	0.01	0.01	ASTM D482, EN ISO 6245
Cetane Index	Min		Range 0-100	46	48	48	48	ASTM D4737, EN ISO 4264
Cetane Number	Min		Range 0-100	51				ASTM D613, EN ISO 5165
Conradson Carbon Residue (10% distillation)		Max	% mass	0.2	0.2	0.2	0.1	ASTM D4530, EN ISO 10370
CFPP (Cold filter plugging point)		Max	°C	Minus 5				EN 116 / IP 309
Cloud point		Max	°C	Minus 1				ASTM 2500, ISO 3015-92, JIS K 2269-87, EN 23015
Colour		Max	Grade	2	2	2	2	ASTM D1500 / IP 196
Conductivity @ 20°C	Min		pS/m	150				ASTM D2624, EN ISO 6297:1997
Copper corrosion (3 hrs @ 50°C)		Max	Class	1	1	1	1	ASTM D130, EN ISO 2160
Density @ 15°C	Min-	Max	g/ml	0.820-0.845	0.82-0.86	0.82-0.86	0.82-0.86	ASTM D4052, EN ISO 3675
Distillation T90 (90% recovered)		Max	°C				360	ASTM D86, EN ISO 3405:1998
Distillation T95 (95% recovered)		Max	°C	360	360	370		ASTM D86, EN ISO 3405:1998
Distillation volume recovered @ 250°C		Max	%	65				EN ISO 3405:1998
Distillation volume recovered @ 350°C	Min		%	85				EN ISO 3405:1998
Filter blocking tendency		Max		2				ASTM D2068, IP 387
Flash point	Min		°C	66	66	66	66	ASTM D93, EN 22719
Kinematic viscosity @ 40°C	Min-	Max	cSt	2.0-4.5	2.0-4.5	2.0-4.5	2.0-4.5	ASTM D445, EN ISO 3104
Lubricity (HFRR) (WSD 1,4) @ 60°C		Max	microns	460	460	460	460	ASTM D6079, IP 450, ISO 12156-1
Odour				Merchantable				
Oxidation stability		Max	mg/L	25				ASTM D2274, EN ISO 12205
Particulate matter		Max	mg/kg	24				EN 12662
Polyaromatic hydrocarbons (PAHs)		Max	% weight	11	11			IP 391:1995
Pour point		Max	°C		9	9	9	ASTM D97
Sulfur content		Max	ppm	10	50	500	2500	ASTM D5453, EN ISO 20846/7 & 20884
Water content		Max	mg/kg	200				EN ISO 12937
Water & sediment		Max	% volume	0.05	0.05	0.05	0.05	ASTM D2709

FUEL OIL

Assessment	CODE	Mavg	Pavg	Wavg	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	CURRENCY	UOM	CONV
FO 180 CST 3.5% S FOB Spore Cargo	PUADV00	PUADV03			FOB	Singapore	15-30 days	20,000	40,000	US$	Metric Tons	6.35
FO 180 CST 3.5% S FOB Spore Cargo sulfur ppm					FOB	Singapore		20,000	40,000	US$	Metric Tons	NA
FO 180 CST 3.5% S FOB Spore Cargo vs FO 180 CST MOPS strip	AAGZF00	AAGZG00			FOB	Singapore	15-30 days	20,000	40,000	US$	Metric Tons	6.35
FO 180 MOPS strip 15-35 days Forward	AAWTU00	AAWTU03				Singapore		20,000	40,000	US$	Metric Tons	6.35
FO 180 MOPS strip 7-14 Days Forward	AAWWI00	AAWWI03				Singapore		20,000	40,000	US$	Metric Tons	6.35
FO 180 MOPS strip 3-8 days Forward	AAWTV00	AAWTV03				Singapore		20,000	40,000	US$	Metric Tons	6.35
FO 180 CST 2.0% S FOB Spore Cargo	PUAXS00	PUAXS03			FOB	Singapore	15-30 days	20,000	40,000	US$	Metric Tons	6.35
FO 180 CST 2.0% S FOB Spore Cargo vs FO 180 CST MOPS strip	AAWTT00	AAWTT03			FOB	Singapore	15-30 days	20,000	40,000	US$	Metric Tons	6.35
FO 180 CST FOB Arab Gulf Cargo	PUABE00	PUABE03			FOB	Arab Gulf	15-30 days	20,000	40,000	US$	Metric Tons	6.35
FO 180 CST FOB Arab Gulf vs MOPAG 180 CST	AAXJA00	AAXJA03			FOB	Arab Gulf	15-30 days	20,000	40,000	US$	Metric Tons	6.35
FO 180 CST vs FO 380 CST FOB Arab Gulf	PPXDM00	AAFDI00			FOB	Arab Gulf	15-30 days	20,000	40,000	US$	Metric Tons	6.35
FO 180 CST 1.5% S C+F Okinawa Cargo	PUBFL00	PUBFM03			C+F	Japan	15-30 days	20,000	40,000	US$	Metric Tons	6.35
FO 180 CST 1.5% S C+F Okinawa Cargo vs FO 180 CST MOPS strip	PUBGE00	PUBGF03			C+F	Japan	15-30 days	20,000	40,000	US$	Metric Tons	6.35
FO 180 CST 3.5% S C+F Japan Cargo	PUACJ00	PUACJ03			C+F	Japan		20,000	40,000	US$	Metric Tons	6.35
FO 180 CST 3.5% S C+F Okinawa Cargo	PUBFJ00	PUBFK03			C+F	Japan		20,000	40,000	US$	Metric Tons	6.35
FO 180 CST 3.5% S C+F Okinawa Cargo vs FO 180 CST MOPS strip	PUBFP00	PUBFQ03			C+F	Japan		20,000	40,000	US$	Metric Tons	6.35
FO 180 CST 3.5% S FOB Korea Cargo	PUBDP00	PUBDQ03			FOB	South Korea	15-30 days	20,000	40,000	US$	Metric Tons	6.35
FO 180 CST 3.5% S FOB Korea Cargo vs FO 180 MOPS strip	PUBDR00	PUBDS03			FOB	South Korea	15-30 days	20,000	40,000	US$	Metric Tons	6.35
FO 180 CST 3.5% S MOPS Strip $/mt	AAPJX00	AAPJX03				Singapore		20,000	40,000	US$	Metric Tons	6.35
FO 380 CST 3.5% S FOB Spore Cargo	PPXDK00	PPXDP03			FOB	Singapore	15-30 days	20,000	40,000	US$	Metric Tons	6.35
FO 380 CST 3.5% S FOB Spore Cargo sulfur ppm	PPXDKSF				FOB	Singapore		20,000	40,000	US$	Metric Tons	NA
FO 380 CST MOPS Strip $/mt	AAPJW00	AAPJW03				Singapore		20,000	40,000	US$	Metric Tons	6.35
FO 380 CST 3.5% S FOB Spore Cargo vs FO 380 CST MOPS strip	PPXDL00	AAFDD00			FOB	Singapore	15-30 days	20,000	40,000	US$	Metric Tons	6.35
FO 380 CST MOPS strip 15-35 Days Forward	AAWWJ00	AAWWJ03				Singapore		20,000	40,000	US$	Metric Tons	6.35
FO 380 CST 3.5% FOB Arab Gulf Cargo	AAIDC00	AAIDD00			FOB	Arab Gulf	15-30 days	20,000	40,000	US$	Metric Tons	6.35
FO 380 CST FOB Arab Gulf vs MOPAG 380 CST	AAXJB00	AAXJB03			FOB	Arab Gulf	15-30 days	20,000	40,000	US$	Metric Tons	6.35
FO 380 CST 3.5% S FOB Korea Cargo	PUBDY00	PUBDZ03			FOB	South Korea	15-30 days	20,000	40,000	US$	Metric Tons	6.35
FO 380 CST 3.5% S FOB Korea Cargo vs FO 380 MOPS strip	PUBEA00	PUBEB03			FOB	South Korea	15-30 days	20,000	40,000	US$	Metric Tons	6.35

FUEL OIL

Singapore fuel oil: All fuel oil assessments are typically based on cracked material. In Singapore, the HSFO 180 and 380 CST assessments reflect transactions, bids and offers for parcels of a minimum of 20,000mt, maximum 40,000mt per transaction, loading 15-30 days from the date of publication. Market participants should specify loading for a five-day date range when submitting bids and offers for publication.

Singapore's Standard Specs for 380 centistoke Fuel oil

Property	Standard
Sulfur Max	3.5%
Kinematic viscosity Max	380 CST
Specific gravity at 15 C kg/l Max	0.991
Flash point Min	66 deg C
Pour point Max	24 deg C
Ash on a weight basis Max	0.10%
Conradson carbon residue (CCR) Max	18%
Vanadium Max	300 parts per million (ppm)
Sodium Max	100 ppm
Aluminium + Silicone Max	80 ppm
Water by distillation volume Max	0.50%
Sediment by extraction Max	0.10%
Total existent sediment	0.10%

Singapore's Standard Specs for 180 centistoke Fuel Oil, 3.5% sulfur

Property	Standard
Sulfur Max	3.5%
Kinematic viscosity Max	180 CST
Specific gravity at 15 C kg/l Max	0.991
Flash point Min	66 deg C
Pour point Max	24 deg C
Ash on a weight basis Max	0.10%
Conradson carbon residue (CCR) Max	16%
Vanadium Max	200 parts per million (ppm)
Sodium Max	100 ppm
Aluminium + Silicon Max	80 ppm with aluminium at Max 30 ppm
Water by distillation volume Max	0.50%
Sediment by extraction Max	0.10%
Total existent sediment	0.10%

Any terminal nominated for performance on an FOB Singapore fuel oil transaction concluded during the Platts assessment process should be able to receive an Aframax-sized vessel, which typically weighs around 80,000 deadweight tons when fully loaded. The terminal should typically be able to manage at least one co-load of standard-sized cargoes of 20,000mt to 40,000mt. For instance, a vessel which is already carrying 20,000mt of fuel oil should be able to load at least another 20,000mt from a second terminal, without draft restrictions hindering a vessel's ability to leave the port.

Platts assesses 2.0% and 3.5% sulfur 180 centistoke grades FOB Singapore. Platts also assesses 380 centistoke with a 3.5% sulfur content.

Following a detailed review of the market relationship between medium sulfur and low sulfur fuel oil FOB Singapore, Platts amended its methodology for assessing FOB Singapore 180 CST 2% sulfur cargoes. With effect from January 2, 2014, Platts assesses this value by applying a standard quality premium to its benchmark FOB Singapore HSFO 180 CST 3.5% sulfur assessment. Platts established this quality premium at 2.25% of the base value of FOB Singapore HSFO 180 CST 3.5%. For example, if Platts assesses the value of HSFO 180 CST 3.5% at $600/mt, the quality premium would be $13.50/mt and the outright price assessment for 180 CST 2% would be $613.50/mt. Platts made this adjustment to reflect the fact that liquidity in the medium sulfur fuel oil market has diminished to very low levels across Asia. The value reflects the relative premiums for the medium sulfur fuel over the period 2011-2013.

Singapore's Standard Specs for 180 centistoke Fuel Oil, 2.0% sulfur

Property	Standard
Sulfur Max	2.0%
Kinematic viscosity Max	180 CST
Specific gravity at 15 C kg/l Max	0.991
Flash point Min	66 deg C
Pour point Max	24 deg C
Ash on a weight basis Max	0.10%
Conradson carbon residue (CCR) Max	16%
Vanadium Max	95 parts per million (ppm)
Sodium Max	65 ppm
Aluminium + Silicon Max	80 ppm with aluminium at Max 30 ppm
Water by distillation volume Max	0.50%
Sediment by extraction Max	0.10%
Total existent sediment	0.10%

Platts announced on March 12, 2012 that it would amend the sulfur content reflected in its 380 CST high sulfur fuel oil FOB Singapore and FOB Arab Gulf cargo assessments from July 2, 2012. Platts decreased the maximum specified allowable sulfur to 3.5% maximum standards, lower from the previous ceiling of 4% sulfur maximum standard. Platts amended the vanadium content specified for 380 CST, high sulfur fuel oil assessed in the FOB Singapore market from April 1, 2009. Platts increased the maximum specified allowable vanadium to 300 parts per million, up from a previous ceiling of 200ppm. These changes aligned sulfur and vanadium content in assessed HSFO cargoes with standard quality in the bunker fuel market, which is the predominant end-use for 380CST fuel oil cargoes in Singapore.

South Korea fuel oil: Platts assesses 180 and 380 centistoke cargoes FOB South Korea. The assessments reflect parcels of around 30,000 mt loading 15-30 days forward. These cargoes typically trade linked to mean of Platts Singapore, 180 centistoke 3.5% sulfur assessment. Platts also assesses premiums/discounts to the mean of Platts Singapore for each grade. Following an extensive review, Platts confirmed in January 2014 it would discontinue its FOB Korea 1.5% sulfur 180 CST fuel oil assessment with effect from April 1, 2014. The discontinuation of this assessment reflects the fact that this grade is no longer typically sold from this location.

Japan fuel oil: Platts assesses 180 centistoke cargoes delivered into the Chiba area and FOB Okinawa. The C+F Japan assessment is a netforward from the FOB Singapore 180 CST assessment using 80,000mt freight rates published in the Platts Dirty Tankerwire. See "Platts Netback Methodology in Asia and the Middle East," at the end of this document, for more information on how these values are calculated. The assessments reflect parcels of around 30,000 mt loading 15-30 days forward. These cargoes typically trade linked to mean of Platts Singapore, 180 centistoke 3.5% sulfur assessment Following an extensive review, Platts confirmed in January 2014 that the FOB Okinawa 1.5% sulfur 180 CST and 3.5% sulfur 180 CST fuel oil assessments would be discontinued with effect from April 1, 2014. The discontinuation of these assessments reflects the fact that these grades are no longer typically sold from this location.

Middle East fuel oil: The Arab Gulf fuel oil 180 CST assessment is a netback to Singapore using 80,000mt freight rates. Freight rates reported

in the Platts Dirty Tankerwire are used to derive the FOB Arab Gulf fuel oil assessment. It may also be assessed independently depending on spot cargo movements and competing barrels from other areas. Density in the Arab Gulf varies and assessments include 0.96-0.975. See "Platts Netback Methodology in Asia and the Middle East," at the end of this document, for more information on how these values are calculated.

The Arab Gulf fuel oil 380 CST assessment is assessed as a netback to Singapore using 80,000mt freight rates. Freight rates reported in the Platts Dirty Tankerwire are used to derive the FOB Arab Gulf fuel oil assessment. It may also be assessed independently depending on spot cargo movements and competing barrels from other areas. See "Platts Netback Methodology in Asia and the Middle East," at the end of this document, for more information on how these values are calculated.

LSWR

Assessment	CODE	Mavg	Pavg	Wavg	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	CURRENCY	UOM	CONV
LSWR FOB Indonesia Cargo	AAUGR00	AAUGR03			FOB	Indonesia	15-30 days	20,000	40,000	US$	Barrels	6.6
LSWR FOB Indonesia Cargo vs FO 180 MOPS strip	AAWTX00	AAWTX03			FOB	Indonesia	15-30 days	20,000	40,000	US$	Barrels	6.6
LSWR Mixed/Cracked FOB Indonesia Cargo	PPAPU00	PPAPU03			FOB	Indonesia	15-30 days	20,000	40,000	US$	Barrels	6.8
LSWR Mixed/Cracked FOB Indonesia Cargo vs FO 180 CST MOPS strip $/bbl	AAHXR00	AAHXS00			FOB	Indonesia	15-30 days	20,000	40,000	US$	Barrels	6.8

LSWR

Platts assesses LSWR Mixed/Cracked and V-1250 (currently named simply "LSWR" in Platts publications) grades of Low Sulfur Waxy Residue, on an FOB Indonesia basis. Platts observes activity in the V-1250 market, and applies normalization procedures where necessary for assessment purposes. Platts is constantly monitoring liquidity in all existing and likely future grades of LSWR, and may amend the underlying specifications of its "LSWR" assessment to reflect prevailing market trends through time.

LSWR Mixed/Cracked: Liquidity in traditional LSWR Mixed/Cracked is very low, owing to refinery upgrades across the region which have minimized production of LSWR other than V-1250 quality. As a result of low liquidity, Platts' LSWR Mixed/Cracked assessment is established by applying a steady, quality-based premium to the tradable V-1250 grade of LSWR. Platts continues to invite comment regarding the continuation of its LSWR Mixed/Cracked price assessment.

Liquidity in traditional LSWR Mixed/Cracked is very low, owing to refinery upgrades across the region which have minimized production of LSWR other than V-1250 quality. As a result of low liquidity, Platts' LSWR Mixed/Cracked assessment is established by applying a steady, quality-based premium to the tradable V-1250 grade of LSWR. Platts continues to invite comment regarding the continuation of its LSWR Mixed/Cracked price assessment.

The mixed-cracked assessment reflects a maximum sulfur content of 0.2%; API gravity of 20.5-29.5; maximum pour point 120; and viscosity 36-150 CST maximum at 50 degrees Celsius.

LSWR: Platts launched a new assessment for a new, more prevalent grade of Indonesian Low Sulfur Waxy Residue on October 1, 2010, which at that time was V-500. The assessment is labelled simply as "LSWR." From August 1, 2012, Platts amended the specifications of its FOB Indonesia Low Sulfur Waxy Residue assessment to reflect a higher viscosity grade of fuel known as V-1250, as announced June 27, 2012 and in line with previous announcements from Platts on the intended evolution of the assessment. The assessment continues to be labelled as LSWR, and reflects typical V-1250 specifications: maximum sulfur content of 0.35%, maximum viscosity of 321 CST at 140 degrees Fahrenheit, and maximum pour point of 130 degrees F. The new specification includes a higher density, at 0.95, than the previous V-500 specification, at 0.93.

Counterparties regularly bid, offer and trade LSWR on a differential basis against Mean of Platts Singapore 180 CST HSFO around cargo loading dates. This is in line with trading practices for other residual fuel oil grades in Asia.

Market participants should specify a five-day loading date range in bids and offers provided for publication in the assessment process, although bids for a wider date range may be permitted owing to developments in loading programs, where the seller has the option to choose five days upon expression of interest to trade. At least ten days prior to loading, the seller must declare the terminal, when no load port is stated at the point of sale. The buyer must nominate a vessel at least seven days prior to loading, at which time the buyer also narrows the loading window to three days, subject to terminal acceptance. In cases where the load terminal is stated at point of sale, the buyer must still nominate the vessel at least seven days prior to loading.

Platts uses a barrels to metric ton conversion rate of 6.8 for LSWR Mixed-Cracked, and 6.6 for LSWR. Quality tests show cargoes of mixed/crack LSWR loading FOB Indonesia typically show an API gravity of 21.4, which derives a barrels/mt conversion factor of 6.8. Due to the change in density in LSWR, when Platts updated the specification to V-1250, Platts amended the published conversion rate between $/barrel and $/mt for LSWR from 6.8 to 6.6.

LSWR V-1250 typical specifications

		Limit		Test method
	Unit	Min	Max	ASTM / IP / ISO
Specific Gravity at 60/60 deg F			0.95	D 1298
Kinematic Viscosity at 140 deg F	CST		321	D 445
Viscosity Redwood at I/140 deg F	second		1300	IP 70
Sulfur Content	% Wt		0.35	D 2622/1552/4294
Carbon Conradson Residue	% Wt		10	D 189/524
Water Content	% Vol		0.5	D 95
Ash Content	% Wt		0.1	D 482
Flash Point PMCC	deg F	160		D 93
Pour Point	deg F		130	D 97

BUNKER FUEL

Assessment	CODE	Mavg	Pavg	Wavg	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	CURRENCY	UOM	CONV
Bunker FO 180 CST Dlvd Fujairah	PUAXQ00	PUAXQ03			Delivered	UAE	3-7 days	500	1500	US$	Metric Tons	6.35
Bunker FO 180 CST Dlvd Hong Kong	PUACC00	PUACC03			Delivered	Hong Kong	3-7 days	300	1500	US$	Metric Tons	6.35
Bunker FO 180 CST Dlvd Japan	PUACK00	PUACK03			Delivered	Japan	3-7 days	300	2500	US$	Metric Tons	6.35
Bunker FO 180 CST Dlvd Khor Fakkan	PUACO00	PUACO03			Delivered	UAE	3-7 days	500	1500	US$	Metric Tons	6.35
Bunker FO 180 CST Dlvd Kuwait	PUACP00	PUACP03			Delivered	Kuwait	3-7 days	500	1500	US$	Metric Tons	6.35
Bunker FO 180 CST Dlvd Mumbai	AASSG00	AASSG03			Delivered	India	3-7 days	500	1500	US$	Metric Tons	6.35
Bunker FO 180 CST Dlvd Shanghai	AARKC00	AARKC03			Delivered	China	3-7 days	300	2500	US$	Metric Tons	6.35
Bunker FO 180 CST Dlvd Singapore	PUADW00	PUADW03			Delivered	Singapore	3-7 days	500	1500	US$	Metric Tons	6.35
Bunker FO 180 CST Ex-Wharf Singapore	AAFET00	AAFEU00			Ex-Wharf	Singapore	3-15 days	500	1500	US$	Metric Tons	6.35
Bunker FO 180 CST Dlvd South Korea	PUADT00	PUADT03			Delivered	South Korea	3-7 days	300	2500	US$	Metric Tons	6.35
Bunker FO 180 CST Dlvd Sydney	PUAEA00	PUAEA03			Delivered	Australia	3-7 days	500	1500	US$	Metric Tons	6.35
Bunker FO 180 CST Dlvd West Japan	AARJY00	AARJY03			Delivered	Japan	3-7 days	300	2500	US$	Metric Tons	6.35
Bunker FO 180 CST Jeddah/Yanbu/Rabigh Aramco	PUACM00	PUACM03			Delivered	Saudi Arabia	3-7 days	500	1500	US$	Metric Tons	6.35
Bunker FO 180 CST RasTanura/Dammam Aramco	PUABN00	PUABN03			Delivered	Saudi Arabia	3-7 days	500	1500	US$	Metric Tons	6.35
Bunker FO 380 CST Dlvd Fujairah	PUAXP00	PUAXP03			Delivered	UAE	3-7 days	500	1500	US$	Metric Tons	6.35
Bunker FO 380 CST Dlvd Hong Kong	PUAER00	PUAER03			Delivered	Hong Kong	3-7 days	500	1500	US$	Metric Tons	6.35
Bunker FO 380 CST Dlvd Japan	PUAEV00	PUAEV03			Delivered	Japan	3-7 days	300	2500	US$	Metric Tons	6.35
Bunker FO 380 CST Dlvd Khor Fakkan	PUAEX00	PUAEX03			Delivered	UAE	3-7 days	500	1500	US$	Metric Tons	6.35
Bunker FO 380 CST Dlvd Kuwait	PUAEY00	PUAEY03			Delivered	Kuwait	3-7 days	500	1500	US$	Metric Tons	6.35
Bunker FO 380 CST Dlvd Melbourne	PUAWL00	PUAWL03			Delivered	Australia	3-7 days	500	1500	US$	Metric Tons	6.35
Bunker FO 380 CST Dlvd Mumbai	AASSH00	AASSH03			Delivered	India	3-7 days	500	1500	US$	Metric Tons	6.35
Bunker FO 380 CST Dlvd Shanghai	AARKD00	AARKD03			Delivered	China	3-7 days	500	2500	US$	Metric Tons	6.35
Bunker FO 380 CST Dlvd Singapore	PUAFT00	PUAFT03			Delivered	Singapore	3-7 days	500	1500	US$	Metric Tons	6.35
Bunker FO 380 CST Ex-Wharf Singapore	AAFER00	AAFES00			Ex-Wharf	Singapore	3-15 days	500	1500	US$	Metric Tons	6.35
Bunker FO 380 CST Dlvd SouthKorea	PUAFR00	PUAFR03			Delivered	South Korea	3-7 days	300	2500	US$	Metric Tons	6.35
Bunker FO 380 CST Dlvd West Japan	AARJZ00	AARJZ03			Delivered	Japan	3-7 days	300	2500	US$	Metric Tons	6.35
Bunker FO 380 CST Jeddah/Yanbu/Rabigh Aramco	AALPU00	AALPU03			Delivered	Saudi Arabia	3-7 days	500	1500	US$	Metric Tons	6.35
Bunker FO 380 CST Ras Tanura/Dammam Aramco	AASFV00	AASFV03			Delivered	Saudi Arabia	3-7 days	500	1500	US$	Metric Tons	6.35
Bunker FO 500 CST Dlvd Singapore	AAVUO00	AAVUO03			Delivered	Singapore	3-7 days	500	1500	US$	Metric Tons	6.23
Bunker FO 500 CST Ex-Wharf Singapore	AAVUP00	AAVUP03			Ex-Wharf	Singapore	3-15 days	500	1500	US$	Metric Tons	6.23
Marine Diesel Dlvd Japan	POACI00	POACI03			Delivered	Japan	3-7 days	50		US$	Metric Tons	7.45
Marine Diesel Dlvd West Japan	AARKA00	AARKA03			Delivered	Japan	3-7 days	50		US$	Metric Tons	7.45
Marine Gasoil Dlvd Fujairah	AARKH00	AARKH03			Delivered	UAE	3-7 days	50		US$	Metric Tons	7.45
Marine Gasoil Dlvd HongKong	AATXL00	AATXL03			Delivered	Hong Kong	3-7 days	50		US$	Metric Tons	7.45
Marine Gasoil Dlvd Khor Fakkan	AARKI00	AARKI03			Delivered	UAE	3-7 days	50		US$	Metric Tons	7.45

BUNKER FUEL CONTINUED

Assessment	CODE	Mavg	Pavg	Wavg	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	CURRENCY	UOM	CONV
Marine Gasoil Dlvd Kuwait	AAXCV00	AAXCV03			Delivered	Kuwait	3-7 days	50		US$	Metric Tons	7.45
Marine Gasoil Dlvd Melbourne	AARKG00	AARKG03			Delivered	Australia	3-7 days	50		US$	Metric Tons	7.45
Marine Gasoil Dlvd Mumbai	AASSI00	AASSI03			Delivered	India	3-7 days	50		US$	Metric Tons	7.45
Marine Gasoil Dlvd Shanghai	AARKE00	AARKE03			Delivered	China	3-7 days	50		US$	Metric Tons	7.45
Marine Gasoil Dlvd Singapore	AALMZ00	AALNA00			Delivered	Singapore	3-7 days	50		US$	Metric Tons	7.45
Marine Gasoil Dlvd SouthKorea	AAVBN00	AAVBN03			Delivered	South Korea	3-7 days	50		US$	Metric Tons	7.45
Marine Gasoil Dlvd Sydney	AARKF00	AARKF03			Delivered	Australia	3-7 days	50		US$	Metric Tons	7.45
Marine Gasoil Jeddah/Yanbu/Rabigh Aramco	MGOJY00	MGOJY03			Delivered	Saudi Arabia	3-7 days	50		US$	Metric Tons	7.45
Marine Gasoil Kaohsiung/Keelung/Taichung Dlvd CPC Taiwan	CBGAL00				Delivered	Taiwan				US$	Metric Tons	
MFO-180 Hualien/Taichung/Suao TWN CPC Dlvd	CB1AK00				Delivered	Taiwan				US$	Metric Tons	
MFO-180 Kaohsiung/Keelung TWN CPC Dlvd	CB1AL00				Delivered	Taiwan				US$	Metric Tons	
MFO-380 Hualien/Taichung/Suao TWN CPC Dlvd	CB3AJ00				Delivered	Taiwan				US$	Metric Tons	
MFO-380 Kaohsiung/Keelung TWN CPC Dlvd	CB3AK00				Delivered	Taiwan				US$	Metric Tons	
MFO-30 Hualien/Taichung/Suao TWN CPC Dlvd	CB3BA00				Delivered	Taiwan				US$	Metric Tons	
MFO-30 Kaohsiung/Keelung TWN CPC Dlvd	CB3BB00				Delivered	Taiwan				US$	Metric Tons	
MFO-80 Hualien/Taichung/Suao TWN CPC Dlvd	CB8BA00				Delivered	Taiwan				US$	Metric Tons	
MFO-80 Kaohsiung/Keelung TWN CPC Dlvd	CB8BB00				Delivered	Taiwan				US$	Metric Tons	
Marine Diesel Hualien/Suao Dlvd CPC Taiwan	CBDAA00				Delivered	Taiwan				US$	Metric Tons	
Marine Diesel Kaohsiung/Keelung/Taichung Dlvd CPC Taiwan	CBDAB00				Delivered	Taiwan				US$	Metric Tons	
Marine Gasoil Hualien/Suao Dlvd CPC Taiwan	CBGAK00				Delivered	Taiwan				US$	Metric Tons	

BUNKER FUEL

Platts assesses five grades of marine fuel: Intermediate Fuel Oil (IFO) 180 centistoke (CST), IFO 380 CST, IFO 500 CST, Marine Diesel (MDO) and Marine Gasoil (MGO). Since January 3, 2012, Platts has fully reflected revised bunker fuel specifications set out by the International Convention for the Prevention of Pollution from Ships (MARPOL) in global bunker fuel assessments. Under amendments to Annex VI of the convention, high sulfur bunker fuel supplied at major global bunkering locations from 2012 onwards must contain a maximum of 3.5% sulfur, down from the previous maximum sulfur content of 4.5%.

The worldwide market generally follows similar specifications for these grades in all locations. The specifications most commonly followed are those defined by the International Organization for Standardization in document ISO 8217:2005 (E) - Petroleum products - Fuels (class F) - Specifications of marine fuels. New ISO standards issued in 2010 have not yet become commonly reflected in most bunker supplies around the world. Platts regularly reviews market conditions, and will monitor for evidence that newer standards are being traded more broadly in the market. Unless otherwise specified, Platts bunker fuel assessments for all European ports reflect the following standards:

IFO 500: Platts' assessed specifications conform to those for RMK 500. Approximate Kinematic Viscosity: max 500 CST at 50 degrees C. Flash point: min 60 deg C. Pour point (upper) winter quality: max 30 deg C; summer quality: same. Ash: max 0.15 m/m. Sulfur: max 3.5%. Vanadium max 600 mg/kg. Aluminum plus silicon: max 80 mg/kg. Water: max 0.5% (ISO 8217:2005). In the absence of market bids and offers, 500 CST price assessments will reflect the viscosity spread from the current assessed 380 CST bunker fuel grade.

IFO 380: Specifications generally conform to that for RMG 380. Approximate Kinematic Viscosity: At 50 C, max 380 cst. Flash point 60 C minimum. Pour point (upper) winter quality, 30 C maximum; summer quality, same. Ash 0.15 m/m maximum. Sulfur, maximum 3.5%. Vanadium max 300 mg/kg. Aluminium plus silicon, 80 mg/kg max; water, 0.5% maximum.

IFO 180: Specifications generally conform with that for RME 180. Approximate Kinematic Viscosity: At 50 C, max 180 cst. Flash point 60 C minimum. Pour point (upper) winter quality, 30 C maximum; summer

quality, same. Ash 0.10 m/m maximum. Sulfur, maximum 3.5%. Vanadium max 200 mg/kg. Aluminium plus silicon, 80 mg/kg max. ; water, 0.5% maximum.

Marine Diesel: Specifications generally conform with that for DMB. Kinematic viscosity at 40 C, max 11 cst, Flash point 60 C minimum; Pour point (upper) winter quality 0 degrees C; pour point upper summer quality 6 degrees C, Ash 0.01% max, sulfur, maximum 2%; water, 0.3% maximum, Zinc max 15 mg/kg, Phosphorus max 15 mg/kg, Calcium max 30 mg/kg

Marine Gasoil: Specifications generally conform with that for DMA 1.5% sulfur. Kinematic Viscosity at 40 degrees C, 1.5 min CST, max 6 CST, Flash point 60 degrees C min, Pour point (upper) winter quality, - 6 degrees C, pour point upper, summer quality 0 degrees C, Ash 0.01% max, Sulfur maximum 1.5%. Cetane index minimum 40, Zinc max 15 mg/kg, Phosphorus max 15 mg/kg, Calcium max 30 mg/kg.

Platts' delivered bunker assessments across the region reflect bunker fuel for delivery at port three to seven days after the day of publication, except for Singapore's ex-wharf assessments which reflect deliveries 3-15 days out. Prices assessed for these markets reflect activity reported to Platts throughout the day, and values for all reported trades are always normalized to reflect the prevailing value of the market at 5.30 p.m. in Singapore. Prices are assessed in $/metric ton.

The minimum size parcel assessed is 500 metric tons for 180CST, 380CST and 500 CST bunker fuel, except in Japan, South Korea, Hong Kong and Shanghai where a minimum quantity of 300mt is assessed (500mt for 380CST in Hong Kong and Shanghai). The typical maximum quantity is 1,500 mt, except in Japan, South Korea and Shanghai were typical trading volumes can reach 2,500 mt per stem. Marine gasoil and marine diesel assessments are for small parcels, often less than 50 mt.

Platts assesses gasoil and fuel oil bunkers at ports in Singapore, Japan, Korea, Australia, Fujairah, Khor Fakkan, Shanghai and Hong Kong. Kuwait is assessed ex-pipe. With the exception of the ex-wharf prices for Singapore, the other assessments for these regions all are done on a delivered basis.

In December 2013, Platts announced that it would realign it publishing schedule for global bunker fuel markets with the schedule for its core publishing hubs in Singapore, London and Houston with effect from 2014. Under this revised approach, all bunker fuel assessments for Asia and the Middle East would be published in accord with the Singapore publishing schedule.

Japan and Korea delivered bunker fuel: Prices assessed for these markets reflect activity reported to Platts throughout the day, and values for all reported trades are always normalized to reflect the prevailing value of the market at 6.30 p.m. in Tokyo. Platts reflects quantities of 300-2,500 metric tons. The Japan assessment reflects activity delivered in the Tokyo/Yokohama Bay area. In November 2009, Platts added a new West Japan assessment, reflecting bids, offers and trades for bunker fuel delivered in Setouchi (includes Mizushima and Fukuyuma ports), Kyushu (Oita port) and Hanshin areas (Kobe and Osaka ports). Activity in other ports is normalized to Setouchi after taking into account barging costs. Korea assessments are based on market activity in Pusan and Ulsan.

Singapore ex-wharf bunker fuel: Platts ex-wharf Singapore fuel oil bunker assessments reflect spot trading activity three to 15 days from the date of publication. The assessments will reflect trading activity up to 5.30 PM Singapore time. Transactions of between 1,000 mt and 6,000 mt per parcel are taken into account for assessment purposes. Buyers/sellers must specify a loading laycan of three days at the time of submitting bids or offers for publication in the assessment process.

Parcel to be supplied on an ex-wharf basis one safe terminal, off-shore delivery but within the Port of Singapore limits to buyer's nominated vessel/barge. Inter/in Tank Transfer (ITT) is also acceptable. The buyer should nominate the barge/vessel between two to five working days in advance of the load date as per current industry practices at the various load terminals. The seller should notify the buyer of barge acceptance promptly and within a reasonable time. But the acceptance is subjected to terminal availability. Seller should supply material that is merchantable.

In the event of the buyer being unable to load the purchased parcel within the contractual loading date range, a surcharge will be applied. The surcharge is in the amount of $0.60 (US Dollars) per metric ton per seven calendar days. The surcharge shall be imposed on any unlifted quantity after the last day of the contractual loading date range (last day of the contractual loading date range shall count as day zero).

Mooring/Wharfage/Piloting: Any cost associated with the barge transportation shall be borne by the buyer.

Quantity and quality should be based on certificate of quantity and quality issued by seller's loading terminal. In the event of a dispute, seller and buyer to jointly appoint a mutually acceptable independent inspector to determine quality and quantity based on loading samples and figures. If an issue arises over the surveyor, either party has the right to appoint an additional surveyor. Cost of appointing mutual inspector shall be equally shared between buyer and seller.

Demurrage: Not Applicable, but seller is to supply cargo within reasonable time.

Tolerance: Industry standards allow for an operational tolerance level on quantity of plus/minus five percent.

Title and Risk: Title and risk of product shall pass to buyer when oil passes buyer's vessel/barge permanent flange connection at loading terminal or mother vessel in the event of barge to barge loading.

Payment: Payment should be made in US dollars in accordance to previously established payment practices. These payment practices include full invoice value by telegraphic transfer, cheque, and by collection within thirty days from the date of loading (i.e. Date of certificate of quantity from loading terminal). Date of loading to count as Day One. Payment shall be made without withholding, deduction, discount, counter claim or offset of any kind against presentation of seller's invoice. All bank charges at the buyer's bank will be borne by the buyer's account. All bank charges at the seller's bank will be borne by the seller's account. If payment falls due on a Sunday or Monday New York banking holiday, payment shall be made on the immediate following banking day. Payment falling due on a Saturday or non-Monday banking holiday in New York shall be made on the previous banking day.

In the event that payment was not settled against invoice on the due date, then without prejudice to the application of any provisions hereof and / or to any other remedy available to buyer herein or otherwise, buyer shall pay interest on the overdue amount at the prime lending rate assessed. Typically a US dollar interest rate reflecting the average of four major banks in Singapore or a major bank are used. In addition, seller adds two percent to the base rate or two percent per month whichever is

higher, until and including the date of settlement is made. Payment of the interest shall be made on the same day of the overdue payment made by the buyer.

Typical industry contracts add that the following paragraph shall not be construed by the buyer as an indication of the seller's willingness to provide extended credit.

Credit terms: Buyer shall open an irrevocable standby letter of credit or banker's guarantee from a first class international bank located in Singapore in form and substance acceptable to seller and valid for a minimum duration of sixty days from the date of loading. Buyer shall open letter of credit or banker's guarantee no later than (ten) working days from the loading date. The letter of credit or banker's guarantee shall be open for an amount of at least 105% of the estimated purchase value.

Law and Arbitration: Any dispute arising in connection with this agreement, including any questions regarding its existing, validity or termination shall be referred to and resolved by arbitration in Singapore in accordance with the arbitration rules of Singapore International Arbitration Center ('SIAC Rules') for the time being in force which rules are deemed to be incorporated by agreement of the parties and there are no oral promises, representations or warranties affecting it. The language of the arbitration shall be English. The validity, construction and performance of the agreement shall be governed by the law of Singapore.

Force Majeure: If either party is rendered unable by force majeure to perform or comply fully or in part with any obligations or conditions of this contract, upon such party's giving written notice to the other of such force majeure within forty eight (48) hours after receiving notice thereof, such performance or compliance shall be suspended. During the continuance of the inabilities so caused, and such party shall be relieved of liability and shall suffer no prejudice for failure to perform the same during such period.In the event that the said period of suspension of performance shall continue in excess of thirty (30) calendar days, this contract is deemed to be cancelled without liability of either party, unless otherwise mutually agreed.

The term force majeure may include, by way of example and not in limitation, fire, wars of belligerent action, riots or commotions, acts of God, navigational accidents, vessel/barge damage or loss, accidents at or closing of navigation or transportation mechanism, strikes, grievances, or actions by among workers, lock-outs, other labor disturbances, explosions or accidents to wells, pipelines, storage depots, refinery facilities, machinery and other facilities, actions of any government, or by any person purporting to represent a government, or other cause not reasonable within the control of the respective parties.

POSTED BUNKER PRICES

Chinese Petroleum Corp.: Platts publishes CPC's posted prices for MGO, MDO, 30CST, 80CST, 180CST and 380CST for the Taiwanese ports of Hualien, Suao, Kaohsiung, Keelung and Taiching. The posted prices for bunker fuel sold by CPC are quoted on a delivered basis. They are quoted in $/mt. Base size is 1,000 mt, but lots larger than that often receive a rebate of $5/mt. Smaller lot sizes often get a rebate of $3-$4/mt. Delivery is by barge for all key ports, except Hualien, where it is by pipeline.

PLATTS NETBACK METHODOLOGY IN ASIA AND THE MIDDLE EAST (2014 RATES)

The following document contains the methodology for product netbacks and netforwards used in Asia-Pacific.

Please note that the flat rates are changed once a year on the first working day of the new year and are applicable till the last working day of the year.

Platts publishes freight spot assessments for dirty and clean tankers. The freight assessments are published primarily as percentages against a Worldscale (WS) rate.

In the following examples, the base rate is multiplied against the spot market multiplier to obtain the actual freight cost. For example, a Worldscale rate of 200 implies a freight rate that is twice the base rate.

This document outlines Platts' freight methodology for gasoline, naphtha, fuel oil, gasoil/jet kero and Australian netback assessments.

Gasoline freight methodology

Singapore to Jebel Ali at 15.92

(Quoin Island to Singapore + Jebel Ali to Quoin Island)

FOB AG 95 RON:

Jebel Ali to Quoin Is	= 0.90
Quoin Is to Singapore	= 14.20
Jebel Ali port charges	= 0.82
	TOTAL = 15.92

Formula: Freight = Spot WS x 15.92 / 8.5

TO CONVERT BETWEEN METRIC TONS AND BARRELS use 8.5.

Naphtha freight methodology

1. Singapore netback

Freight rate methodology for Singapore to Japan:

Base rate from Singapore to Chiba, Japan equals $14.00/mt

Formula: Freight = Spot WS x 30 / 26.25 x 14.00

2. Arab Gulf netback

Quoin Island to Chiba/Yokohama base rate equals	$27.28/mt
Jubail/Mina Al Ahmadi to Quoin Island	2.63 + 0.27 = 2.90
Shuaiba/Ras Tanura to Quoin Island	2.72
Ruwais/Mina Abdulla to Quoin Island	3.05
	8.67 / 3 = 2.89
AG to Chiba = Base rate Quoin Island to Chiba/Yokohama	27.28
plus average of 6 ports to Quoin Island	2.89
Total:	$30.17/mt

Formula: Freight = Spot WS x 55 / 52.50 x 30.17

For Naphtha LR2 netback:

Spot 75,000mt: Freight = Spot WS x 30.17

Fuel Oil freight methodology

1. Japan netback

Singapore to Chiba/Yokohama, Japan: The freight rate is $15.27/mt. This amount is multiplied by the Worldscale rate between Singapore and Japan. The amount is then added to the Singapore fuel oil assessment.

Formula: Freight = Spot WS x 15.27

2. Arab Gulf netback

Quoin Island to Singapore: $14.20/mt plus $2.22/mt for the additional expense to the loading port (In this case, Mina al Ahmadi is used as a typical port). This yields a net freight cost of $16.42/mt. This amount of $/mt should be used for the AG freight netback calculation.

Formula: Freight = Spot WS x 16.42

Gasoil/Jet/Kerosene freight methodology

Singapore - Arab Gulf netback calculations:

Quoin Island to Singapore base rate:	$14.20/mt
Jubail to Quoin Island base rate (+port charges)	1.56 + 0.27 = 1.83
Bahrain to Quoin Island base rate:	1.67
Ras Tanura to Quoin Island base rate:	1.56
Mina al-Ahmadi to Quoin Island base rate:	2.22
	7.28 / 4 = 1.82
AG to Singapore = Base rate Quoin Island to Singapore	14.20
Plus average of four-port discharge	1.82
Total:	$16.02/mt

Formula: Freight = Spot WS x 16.02

For Gasoil LR2 netback:

Formula: Freight = Spot 75,000mt WS x 16.02

The final calculation is divided by 7.45 for gasoil and 7.9 for jet kero to convert $/mt into $/b.

Australian netback assessments

Base freight rate from Singapore to Melbourne/Sydney, Australia is $22.52/mt.

To obtain the actual freight Platts will determine the spot rate from Singapore to Australia times 22.52 and then the result will be divided by the conversion rate to convert $/mt into $/b.

1) C+F Australian Mogas:

Freight = Spot WS x 22.52 / 8.5

2) C+F Australia Gasoil:

Freight = Spot WS x 22.52 / 7.45

3) C+F Australia Jet:

Freight = Spot WS x 22.52/ 7.9

REVISION HISTORY

November 2014: Platts updated this guide to incorporate standards for compensation expectations for late performance. Similar guidance had been present in methodologies published before August 2013.

September 2014: Platts updated this guide to reflect the discontinuation of spot premiums for second month loading for butane and propane FOB Middle East, and to reflect the amendment of the C+F Japan gasoil assessment to a specification of maximum 10ppm sulfur. Platts removed an erroneous reference to a Singapore ex-wharf marine gasoil, which Platts does not assess.

June 2014: Platts completed an annual update to the Asia & Middle East Refined Oil Products Guide in June 2014. In this update, Platts reviewed all content. The guide was updated to rename "Asia Proxy" as "Asia Strip" for LPG strip values; further clarify and differentiate Singapore's naphtha netback and spot naphtha assessment; incorporate published guidance around contaminants and FAME in Singapore gasoil assessments; break out definitions for gasoil assessments and netbacks in the Middle East; remove references to previously discontinued fuel oil assessments for China; indicate discontinued fuel oil assessments for South Korea and Japan; remove a reference to discontinued bunker fuel postings from Chimbusco; and remove a reference to Pasir Gudang in the bunker fuel assessment section. 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 made minor typographical edits throughout.

January 2014: Platts updated this guide to note changes to its bunker fuel assessment publication schedule; add 500CST bunker fuel specifications; note changes to Singapore gasoline specifications for distillation and density; changes to its Singapore 2% sulfur fuel oil assessment methodology; discontinuation of China fuel oil assessments; and the 2014 freight netback calculations for all products.

December 2013: Platts updated the units of measurement reflected for West India and the Middle East in the gasoline assessment definitions table contained in this methodology guide.

November 2013: Platts updated this guide, making minor edits through the text. Platts also noted plans to updates its methodology for 2% sulfur fuel oil in Singapore with effect from January 2014. Platts also noted plans to discontinue all China fuel oil assessments from January 2014. This update also notes a planned change to specifications reflected in Platts Singapore gasoline assessments from January 2014.

August 2013: Platts revamped all Oil Methodology And Specifications Guides, including its Asia Pacific & Middle East Refined Oil Products guide, in August 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.