

Methodology and specifications guide

Coal

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Introduction	2	Part VI: Requests for clarifications of data and complaints	12
How this methodology statement is organized	2		
Part I: Input data	2	Part VII: Definitions of the trading locations for which Platts publishes assessments	13
Reporting data to Platts	3	Asia-Pacific Thermal Coal Assessments	13
What to report	3	Atlantic Thermal Coal Assessments	16
How to report	3	Asia-Pacific And Atlantic Thermal Coal Locations	17
MOC data publishing principles	3	US Thermal Coal Assessments	19
Part II: Security and confidentiality	8	US Physical Thermal Coal Netbacks	21
		Forward Curve Assessments	24
		Petroleum Coke Assessments	25
Part III: Determining assessments	8	Petcoke Location	25
MOC price assessment principles	8	Clean Dark Spreads	27
Normalization price adjustment techniques	8	Spot Dry Bulk Freight Assessments published in Coal Trader International	29
Prioritizing data	9	Metallurgical Coal and Met Coke assessments published in Coal Trader International	30
Assessment Calculations	10		
Part IV: Platts editorial standards	12	Revision history	35
Part V: Corrections	12		

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, 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 the times during each trading day in which Platts considers transactions in determining its assessments 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.

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 previous updates, is included at the end of the methodology. Methodology is reviewed regularly to ensure it reflects current market reality. Such reviews are carried out by Platts reporters and their managers, supplemented and supported by price methodology specialists who operate separately from the reporting teams. Platts follows a clearly defined process for public consultation on material changes to its methodologies. This process is based on full transparency and communication with industry stakeholders aimed at gaining

market acceptance for any proposed introduction or changes to methodology. For more information on the review and approval procedures, please visit: <https://www.spglobal.com/platts/en/our-methodology/methodology-review-change>

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

How this methodology statement is organized

This description of methodology for 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 assessments, including details on what data market participants are expected to submit, the process for submitting data and criteria for timeliness of market data submissions, as well as the editorial collection of input data from market sources.
- 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 assessments. It includes descriptions of the methods that Platts uses for reviewing data, and the methods used to convert raw data into assessments. This also includes 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. This is 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 can contact Platts for clarification of data that has been published, or to share a complaint. It also describes how to find out more about Platts complaint policies.
- Part VII is a list of detailed specifications for the trading locations and products for which Platts publishes assessments for a particular 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: INPUT DATA

Platts objective is to ensure that input data 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 input 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 the commodity being assessed.

Reporting data to Platts

Platts assesses a variety of different markets and commodities. In some of these Platts receives information from back office functions. However, in many markets back office functions are not best placed to communicate relevant market data to Platts editors, and in these instances Platts has processes in place to ensure that data is corroborated either through reviews of entities participating in its process, or through source validation and publication of information.

As part of its standard editorial practise, Platts routinely 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. Further details concerning Platts MOC Participation Guidelines can be found online at <https://www.platts.com/market-on-close>.

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.

Platts may consider verifiable data reported and published through the day as provided for publication by individual sources, through established editorial methods.

Platts has developed guidelines for Management of Sources that address source identification, source evaluation, source development, using source information and source dependency. Individual sources are verified as per Platts Source Management Guidelines.

Platts considers several criteria as whether to use source information. These criteria include:

- Company reputation
- Source position within a company
- Source understanding and knowledge of the market in question
- Ability of source to provide relevant, valuable information
- Ability of Platts to verify information with other sources
- Source credibility

What to report

Platts encourages all market participants to submit all data that may be relevant to Platts assessments, including but not limited to:

- 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 any reasonable method of delivery/communication for information provided for publication in real-time, including for bids, offers and transactions. Platts editors typically communicate with market participants through phone, eWindow (if relevant) and/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. Other means of communication, such as emails during the assessment process, are acceptable but are considered to be atypical. If a market participant chooses to communicate with Platts editorial using such atypical means, this needs to be highlighted well ahead of the assessment process.

The following reporting methods are accepted by Platts editorial staff:

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

Reporters covering the markets in Asia and the Middle East are contactable from around 09:30 to around 18:30 Singapore time, those covering Europe and Africa from around 09:30 to around 18:30 London time, and those covering the Americas from around 08:30 to around 17:30 Houston time.

MOC data publishing principles

The Platts Market on Close (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. Under Platts MOC guidelines for collecting and publishing data, Platts publishes market information including but not limited to firm bids and offers, 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 services. 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 expects all participants in the MOC process to be contactable at all times.

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.

Input data may also include fully and partially confirmed bids, offers and trades, notional trading values and other market information as provided for publication by individual sources, through established editorial methods.

Market reporters endeavor to verify all market information they receive, including by testing it within the market through the publishing process. Trades reported as executed are verified as being executed and Platts ensures that any firm bids/offers reported are available to the market as a whole.

Platts uses various techniques to confirm the quality of data it receives, including cross checks with counterparties as well as requests for supporting documentation. Platts eliminates data in the price assessment process that cannot be verified in the market to the extent deemed appropriate.

All Platts market reporters are trained to analyze the data they receive and to question sources to establish the fullest set of information possible around price data. Reporters are trained to seek a wide variety of information to test reported transactional activity, including the specific price agreed, the counterparty to the trade, the point of origin and destination for delivery of the commodity, the size of the transaction, any physical quality commitments agreed as part of the trade, the terms and conditions

of a trade and when a trade was agreed.

Platts publishes the most relevant information collected that meets its methodological standards, typically through real-time information services and with as much transparency as possible in order to test information within the market.

MOC data submission process

Platts has specific guidelines around data submissions to ensure high quality of information in the assessment process. This includes detailed guidelines on timings for submissions, which can be found in the specific guide for each commodity process. The purpose of the time cut-offs is primarily to ensure logistical executability and standards of incrementability and repeatability to ensure an orderly assessment process. 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.

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. Platts prioritizes data on the basis of timeliness. This sequence is critical for an orderly assessment process.

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.

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. Acknowledgment may take the form of “yes,” “OK,” “y,” “k,” or any other reasonable forms, including by sending back the published information. 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.

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.

Following any trade, an intention to rebid or reoffer must be received by Platts as soon as is possible and within a reasonable time frame, as per incrementability guidelines.

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

A 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 \$100/mt during the MOC. Company A can rebid at \$100/mt or below this level. If the MOC process for the market includes a “freeze” period at the close of the process, bids and offers may only be repeated at the last published price.

When there are multiple bids or offers at the same level, the first participant to reach that level should be the first to be traded. Subsequent deals will go to the second, third and fourth participant at the same level. When a participant is traded, any repeat of their bid/offer will move to the back of the bid/offer queue.

Platts will consider the first participant to express their interest in a bid or offer to be the counterparty for the subsequent trade. Platts will monitor time stamps in the event of a dispute to determine who the first buyer or seller was. In the event of a bid or offer being repeated, the queue of participants expressing interest in that position will be reset. 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, while in certain markets volume may be adjusted to be multiples of a minimum volume. The 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 counterparty. If a participant trades another position during the MOC assessment process, they must communicate to Platts if they wish to withdraw their existing position following the trade. Otherwise, it is assumed the participant’s own position remains active.

All participants that have reported bids and offers for publishing in the Platts process are expected to promptly report any transactions stemming from available bids or offers reported to Platts as part of the MOC assessment process.

Platts synchronizes its computer clocks every day precisely, and will compare the time of any submitted bid, offer or transactional interest against this synchronized time. 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 published.

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

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.

Atypical bids, offers, trades

Platts may publish bids, offers and trades with atypical pricing terms, including benchmark bases and timing. Market information with atypical pricing inherently differs in value from the typical and commonly observable information in the market.

Bids and offers which are deemed as atypical relative to the market may not be fully taken into consideration for the assessment process. In the absence of an associated, liquid derivative instrument atypical pricing bases may be difficult or impossible to evaluate on an outright price equivalent.

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 a commodity should be specified at the moment the initial bid or offer is made. Any unusual request that surfaces at the time a counterparty 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 supporting documentation to ensure the integrity of its assessment process.

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 logistics 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 and/or 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 and 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 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 change, but should include parameters such as backwardation, logistics, and the inconvenience for the buyer in the case of a seller not performing, or contango, logistics and the inconvenience for the seller in the case of a buyer not performing. Compensation should not include consequential costs.

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.

Compensation is subject to editorial review to ensure market practices and overall fairness in the transaction have been followed. Platts review may include an analysis of reasonable compensation. Platts views compensation as a part of full performance due under the parameters of a trade reported in the assessment process.

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 change, but should be to include parameters such as market structure, logistics 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 parcel 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

Platts may track all aspects of performance on trades reported during its MOC assessment process. 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. 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 quality, location, vessel and laycan nominations. MOC trades may be subject to editorial review to ensure market practices and performance in the transaction have been followed.

A failure to meet Platts guidelines for participation and performance

in the MOC may lead to an event driven review. Event driven reviews are designed to help ensure that transactional information and other data inputs used as the basis for Platts price assessments are representative of market value on an ongoing basis.

Post-deal tracking enables Platts to determine the actual performance of the participants in the trade and the validity of their inputs. Platts may publish confirmation of trade performance information.

Specification

Platts assessments reflect typically traded qualities of commodities. Specifications are available in individual specifications guides, published on the Platts website www.platts.com.

Testing of products

Traded commodities are subject to standard testing techniques and protocols to determine contractual performance. Platts typically follows the standards already in place in the trading market, although it may monitor these to ensure that the standards are adequate.

Implied guarantees in specifications

Bids and offers submitted to Platts that include numerical specifications will be assumed to have a series of zeroes to the right of the decimal point or to the right of the last digit to the right of the decimal point.

As an example, a fuel oil cargo with a maximum guarantee of 0.1 Shell Hot Filtration will be considered as 0.1000 etc. If the specification guarantees are otherwise, the buyer or seller should specify it clearly to avoid potential disputes.

Merchantability

Platts only considers in its assessments commodities that are merchantable. Hence, buyers may assume that offers or transactions are for a commodity that is merchantable. Sellers must ensure their offers or transactions are for merchantable commodities.

PART II: SECURITY AND CONFIDENTIALITY

Data is stored in a secure network, in accordance with Platts policies and procedures. Platts assessments are produced in accordance with Platts Market on Close assessment methodology. This means that all data for use in Platts 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 assessments.

PART III: DETERMINING ASSESSMENTS

The following section describes how Platts uses 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.

Platts seeks to establish and publish the value of markets that prevail at the close of the assessment process. Platts has aligned the timestamps reflected in its assessments with what typically is a period of high activity in the markets that Platts observes. Platts believes that aligning its price assessments to typical periods of greater market activity and liquidity provides a robust basis upon which to derive an assessment of market value. Timestamps for each assessment are included in the specifications guide for that assessment.

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 a commodity, 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 commodity, 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 value.

The clarity established by providing a well-defined timestamp is also important for understanding the relationships between the markets that Platts assesses. By ensuring that all assessments within a region reflect market value at the same moment in time, spreads that exist between commodities are also able to be fully and properly reflected. For example, comparing the value of a raw material to a processed commodity is possible when both values have been determined at the same moment in time. By contrast, comparing the price of raw material in the morning, to processed material in the afternoon, might deeply impair the relationship between the commodities – 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 value 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.

Deals done below the level of prevailing bids or above the level

of prevailing offers (i.e., selling through the bid or buying through the offer) will not be reflected in Platts assessments. Platts will only publish expressions of interest to trade with the most competitive, tradeable bid or offer available.

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.

Normalization price adjustment techniques

Platts seeks to align the standard specifications for the markets it assesses and the timestamps reflected in its assessments with standard industry practice. However, physical commodity markets are generally heterogeneous in nature. Key attributes often vary from the base standard reflected in Platts assessments as material is supplied to market.

The quality, delivery location and other specific terms of trade may vary in the physical commodity markets assessed by Platts.

This means that simple averages of trades may not produce a representative assessment value of a physically heterogeneous market.

Because of the complex nature of the physical markets, 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 markets with its standard assessment specifications through a process called normalization.

Normalization is an essential price adjustment technique used to align reported market information to the base standard reflected in Platts price assessments.

Platts establishes the level of normalization by surveying markets and observing the economic impact of variance from the base standard. 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. The 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

Transparency underpins Platts assessment process, just as it does Platts data publishing processes. Platts assessment process considers firm bids, firm offers and arms-length transactions that are transparent and open to sufficient, credible counterparties. Bids, offers or transactions that are not transparent may not be considered in the assessment process; 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.

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, as outlined in part 1 above, 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 between the best firm bid and best firm offer open to the market at the close. This ensures that Platts assessments reflect the transactable value at the close.

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 may 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, firm bids and offers that are available to the entire market take precedence over transactional activity reported to Platts after completion.

The level of each bid or offer must stand firm in the marketplace long enough for any counterparty to transact; 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. Gapping occurs when a bid and an offer are more than one increment apart and a trade occurs. Platts will analyse and evaluate such trades for their representative value. They may not be fully reflected in the final assessment.

Platts assessment guidelines are designed to avoid any distortion of the final price assessment and so inputs that are not verifiable and “one-off” or unrepeatable transactions 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 trade 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.

Similarly, Platts may not publish bids or offers that are provided through untested price levels. 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 between the last incremental bid and the transaction at the gapped level.

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. Platts may observe direct market activity as well as the effect of movements in related markets through spread differentials or blending and shipping economics, for example.

Platts takes into account representative transactions executed at arms-length in the open market occurring during the trading day, up to the close, and additionally taking into account bid and offer information submitted during this period. Platts editors may require direct verification from the principals to a reported bid, offer or deal when communicated through a third party, including a broker.

Assessment Calculations

Units of measurement

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

Commodities are generally internationally 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.

Commodities typically trade in volumetric or energy units, and Platts assessments for these markets reflect common practice in each market. The units and unit range considered for each individual Platts assessment of a physical market is described in the specification guide for each commodity.

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 exchange rates published regionally. Conversion factors are described in the specifications guide for each commodity alongside individual assessment codes.

Use of judgment

Judgment guidelines promote consistency and transparency and are systematically applied by Platts. Where 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 reporters follow specific methodology when exercising judgment or discretion during their assessment process. Platts editors apply judgment when determining (1) whether information is suitable for publication, (2) when and how to normalize data and (3) where to assess final value. All such judgment is subject to review by Platts editorial management for adherence to the standards published in Platts methodologies.

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.

To ensure all assessments are as robust as possible, Platts editorial systems are backed by a strong corporate structure that includes managerial and compliance oversight.

An evaluation process is conducted before publication on every benchmark assessment by a competent peer or manager. The price assessments are reviewed and the exercise of judgment is further discussed and verified during this process. Finally, assessments that are used as benchmarks are supported by assessment rationales. These rationales explain the application of judgment and are published together with the relevant price assessment, offering full transparency to the market.

To ensure the consistent exercise of discretion, Platts ensures that reporters are trained and regularly assessed in their own and each other's markets. Platts manages and maintains internal training guides for each of the different products assessed which aim to ensure Platts price assessments are produced consistently.

Every assessment of a benchmark, including the use of discretion, is reviewed and approved by a competent peer or manager prior to publication.

Reporters are trained to identify potentially anomalous data. Platts defines 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 S&P Global, 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 a commodity 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. Platts spot price assessments reflect this value at precisely the close of the assessment 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 reporters may use judgment to normalize bids, offers or transactions with such extraneous elements to the base market standard, or may exclude them altogether. 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, size option tolerances exercisable by the buyer or seller, or quality specifications.

Outright, differential and spread prices

Platts assesses the outright value of a commodity, as well as differentials when it trades with reference to a benchmark. Platts analyzes 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.

Platts physical price assessments use a variety of inputs, including outright price bids/offers, floating price bids/offers, spread price bids/offers (including EFPs, EFSs etc.) and combinations of fixed and floating prices. Platts' objective is to assess the prevailing tradable outright price of the commodity at the close of the market assessment period. In the event of an observed conflict between outright values and differentials or spreads, outright values prevail in Platts final published assessments.

Platts establishes the hedgable, outright value of floating and spread price indications by applying them to the observable, prevailing value of underlying relevant derivatives instruments. In the event of conflicts observed between the outright values derived from floating and spread prices with different underlying references, Platts takes into account considerations that include the relative liquidity of each relevant derivatives market, and the typicality of a given spread or floating price, when exercising judgement around whether to prioritize one particular floating price or spread over another.

Platts may publish bids, offers and trades with atypical pricing terms, including benchmark bases and timing. Market information with atypical pricing inherently differs in value from the typical and commonly observable information in the market.

Bids and offers which are deemed as atypical relative to the market may not be fully taken into consideration for the assessment process. In the absence of an associated, liquid derivative instrument atypical pricing bases may be difficult or impossible to evaluate on an outright price equivalent.

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.

Timing

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

As an example, gasoline has a value, naphtha has a value and the gasoline versus naphtha spread has a value, and all three match when measured at the same time. 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 value. 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 periods are included in the individual specifications guide for each commodity.

Market structure, such as backwardation and contango, is also factored into the Platts assessment process. If a company offers a parcel loading 15 days forward, the offer may provide market information for the Platts assessment for parcels 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.

Market structure

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

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 material causes the front period to be significantly lower in value than material available at the end of the window. In a backwardated market the tightness of supply causes the prompt material to be at a higher price than material 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 period of the window rather than the back period, or vice versa.

The date ranges reflected by Platts reflect the prevailing trading practices in the region. By not taking very prompt days into consideration, transactions reflecting distressed prices are excluded. The definition of this period varies according to specific markets.

Determination of backwardation or contango

In calculating market structure, the prices of tradable instruments, including derivatives such as futures and swaps, may be used.

Typical calculations include a determination made for the difference in price over a month; a granular value is then calculated from this for each day.

Outright and floating price information

The three main factors used in the commodities markets for price determination are:

- Outright price
- Differentials
- Derivatives

These three factors — outright price, premiums and derivatives – converge in a spot price. Platts may use all three in its assessments.

Outright price: The ultimate question in the mind of an end-user, producer, trader or broker is price. Outright prices are the simple statement of a price at which something can be bought or sold, with the entire value stated – for example, an offer of a cargo of iron ore at \$100/mt. Price in turn determines expense, processing margin, profit, loss, etc. The spot market trades actively on an outright price basis and a floating price basis. Platts takes both into account in its assessments. Platts will publish activity on both a fixed and floating basis.

Differentials: Many transactions are carried out in relation to a benchmark. In this case a differential, also known as a premium/discount is generated. Differentials can arise if the quality, volumes or loading times for a given transaction 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 at \$10/mt above the Platts assessment of that same commodity, as published immediately before, during and after delivery of the cargo. Premiums usually rise when the market's backwardation steepens, and the steeper the curve, the greater the premium. In a contango situation, premiums have a tendency to turn into discounts.

Derivatives: Derivatives are a major determinant in price; they trade frequently and throughout the day. These markets are very reactive and may provide market participants with timely information on market conditions. They can react to arbitrage conditions or movements in overseas markets as well as local conditions. Derivatives may allow companies to adapt their price exposure because they enable market

participants to transform floating prices to fixed or fixed to floating.

PART IV: PLATTS EDITORIAL STANDARDS

All Platts employees must adhere to the S&P Global Code of Business Ethics (COBE), which has to be signed annually. The COBE reflects S&P Global'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 Compliance function that is independent of the editorial group. The Compliance team is responsible for ensuring the quality and adherence to Platts policies, standards, processes and procedures. The Compliance team conduct regular assessments of editorial operations, including checks for adherence to published methodologies.

S&P Global Platts appoints an independent, external auditor with appropriate experience and capability to review and report on its adherence to this stated methodology. The annual report

is published online at <https://www.platts.com/regulatory-engagement>.

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 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 dialog 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 ASSESSMENTS

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

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 are ready to provide guidance when assessment issues require clarification.

ASIA-PACIFIC THERMAL COAL ASSESSMENTS

Assessment	CODE	Mavg	Qavg	CV	Delivery period	Volume	Currency	UOM	Frequency	Timestamp	Specifications (Typical)				Specifications (Range)				Minimum Loadrate	Other Information	
											Sulfur	Ash	Moisture	Volatiles	CV	Sulfur	Ash	Moisture			Volatiles
NEAT Coal Index	JKTCA00	JKTCA03	JKTCA05	5,750 NAR	15-60 days	75,000	USD	Metric Ton	Daily	17.30 Singapore	0.6	15	10	29	5,500-6,100 NAR	Max 1	Max 20	Max 16	Max 38		Standard Panamax
FOB Newcastle	CSNCB00	CSNCB03	CSNCB05	6,300 GAR	7-45 days	50,000	USD	Metric Ton	Daily	17.00 London	0.7	13	10	31	6,100-6,500 GAR	Max 0.75	Max 14	Max 15	27-35		
FOB Newcastle	CSNCC00			6,300 GAR	7-45 days	50,000	EUR	Metric Ton	Daily	17.00 London	0.7	13	10	31	6,100-6,500 GAR	Max 0.75	Max 15	Max 15	27-35		
FOB Newcastle	AAVUW00	AAVUW03	AAVUW02	5,500 NAR	7-45 days	50,000	USD	Metric Ton	Daily	17.30 Singapore	0.65	20	10		5,300-5,700 NAR	Max 0.75	17-23	Max 15			
FOB Newcastle	AAVUX00			5,500 NAR	7-45 days	50,000	EUR	Metric Ton	Daily	17.30 Singapore	0.65	20	10		5,300-5,700 NAR	Max 0.75	17-23	Max 15			
FOB Newcastle	AAVB00	AAVB03	AAVB05	5,500 NAR	7-45 days	50,000	USD	Metric Ton	Daily	17.30 Singapore	0.65	23	10		5,300-5,700 NAR	Max 0.75	17-23	Max 15			
FOB Newcastle Ash Differential	AAVA00			5,500 NAR	7-45 days		USD	Metric Ton	Daily	17.30 Singapore	0.65	20	10		5,300-5,700 NAR	Max 0.75	17-23	Max 15			
FOB Kalimantan	CSCKJ00	CSCKJ03	CSCKJ04	3,800 GAR	7-45 days	50,000	USD	Metric Ton	Daily	17.30 Singapore	0.3	6	38		3,600-4,000 GAR	Max 0.6	Max 9	Max 41		8,000 mt/day	Geared Supramax
FOB Kalimantan	CSCKK00	CSCKK03	CSCKK04	3,800 GAR	7-45 days	50,000	EUR	Metric Ton	Daily	17.30 Singapore	0.3	6	38		3,600-4,000 GAR	Max 0.6	Max 9	Max 41		8,000 mt/day	
FOB Kalimantan	CSBKI00	CSBKI03	CSBKI04	4,200 GAR	7-45 days	50,000	USD	Metric Ton	Daily	17.30 Singapore	0.6	7	35		4,000-4,400 GAR	Max 1	Max 10	Max 40		8,000 mt/day	Geared Supramax
FOB Kalimantan	CSCKI00	CSCKI03	CSCKI04	4,200 GAR	7-45 days	50,000	EUR	Metric Ton	Daily	17.30 Singapore	0.6	7	35		4,000-4,400 GAR	Max 1	Max 10	Max 40		8,000 mt/day	
FOB Kalimantan	CSKAKH00	CSKAKH03	CSKAKH04	5,900 GAR	90 days	50,000	USD	Metric Ton	Daily	17.30 Singapore	0.8	8	15		5,700-6,100 GAR	Max 1	Max 15	Max 20			Geared Supramax
FOB Kalimantan	CSEUP00			5,900 GAR	90 days	50,000	EUR	Metric Ton	Daily	17.30 Singapore	0.8	8	15		5,700-6,100 GAR	Max 1	Max 15	Max 20			
FOB Kalimantan	CSAKI00	CSAKI03	CSAKI04	5,000 GAR	90 days	50,000	USD	Metric Ton	Daily	17.30 Singapore	0.8	8	26		4,800-5,200 GAR	Max 1	Max 12	Max 30			Geared Supramax
FOB Kalimantan	CSEUQ00			5,000 GAR	90 days	50,000	EUR	Metric Ton	Daily	17.30 Singapore	0.8	8	26		4,800-5,200 GAR	Max 1	Max 12	Max 30			

ASIA-PACIFIC THERMAL COAL ASSESSMENTS

Assessment	CODE	Mavg	Qavg	CV	Delivery period	Volume	Currency	UOM	Frequency	Timestamp	Specifications (Typical)					Specifications (Range)				Minimum Loadrate	Other Information
											Sulfur	Ash	Moisture	Volatiles	CV	Sulfur	Ash	Moisture	Volatiles		
PCC 1	PCCQH00	PCCQH03	PCCQH05	5,500 NAR	7-45 days	Min 25,000	USD	Metric Ton	Daily	17.30 Beijing	0.8	15	10	25	5,300-5,700 NAR	Max 1	Max 20	Max 18	Max 40		
PCC 1	PCCQG00	PCCQG03	PCCQG05	5,500 NAR	7-45 days	Min 25,000	Yuan	Metric Ton	Daily	17.30 Beijing	0.8	20	10	25	5,300-5,700 NAR	Max 1	Max 20	Max 18	Max 40		
PCC 2	PCCPN00	PCCPN03	PCCPN05	5,000 NAR	7-45 days	Min 40,000	USD	Metric Ton	Daily	17.30 Beijing	0.8	20	10	25	4,800-5,200 NAR	Max 1	Max 25	Max 18	Max 40		
PCC 2	PCCPM00	PCCPM03	PCCPM05	5,000 NAR	7-45 days	Min 40,000	Yuan	Metric Ton	Daily	17.30 Beijing	0.8	20	10	25	4,800-5,200 NAR	Max 1	Max 25	Max 18	Max 40		
PCC 6	PCCPQ00	PCCPQ03	PCCPQ05	3,800 NAR	30-60 days	Min 40,000	USD	Metric Ton	Daily	17.30 Beijing	0.6	7	35	25	3,600-4,000 NAR	Max 1	Max 10	Max 40			
PCC 6	PCCPR00	PCCPR03	PCCPR05	3,800 NAR	30-60 days	Min 40,000	Yuan	Metric Ton	Daily	17.30 Beijing	0.6	7	35	25	3,600-4,000 NAR	Max 1	Max 10	Max 40			
PCC 6 (VAT Included)	PCCPS00	PCCPS03	PCCPS05	3,800 NAR	30-60 days	Min 40,000	Yuan	Metric Ton	Daily	17.30 Beijing	0.6	7	35	25	3,600-4,000 NAR	Max 1	Max 10	Max 40			
PCC 7	PCCP000	PCCP003	PCCP005	4,700 NAR	30-60 days	Min 40,000	Yuan	Metric Ton	Daily	17.30 Beijing	0.8	8	26		4,500-5,900 NAR	Max 1	Max 12	Max 30			
PCC 7	PCCPP00	PCCPP03	PCCPP05	4,700 NAR	30-60 days	Min 40,000	USD	Metric Ton	Daily	17.30 Beijing	0.8	8	26		4,500-5,900 NAR	Max 1	Max 12	Max 30			
PCC 7 (VAT Included)	PCCFB00	PCCFB03	PCCFB05	4,700 NAR	30-60 days	Min 40,000	Yuan	Metric Ton	Daily	17.30 Beijing	0.8	8	26		4,500-5,900 NAR	Max 1	Max 12	Max 30			
PCC 8	PCCSC00	PCCSC03	PCCSC05	5,500 NAR	15-60 days	Min 25,000	USD	Metric Ton	Daily	17.30 Beijing	0.7	20	12	25	5,300-5,700 NAR	Max 1	Max 23	Max 18	Max 40		
PCC 8	PCCSD00	PCCSD03	PCCSD05	5,500 NAR	15-60 days	Min 25,000	Yuan	Metric Ton	Daily	17.30 Beijing	0.7	20	12	25	5,300-5,700 NAR	Max 1	Max 23	Max 18	Max 40		
PCC 8 (Duty & VAT Included)	PCCFA00	PCCFA03	PCCFA05	5,500 NAR	15-60 days	Min 25,000	Yuan	Metric Ton	Daily	17.30 Beijing	0.7	20	12	25	5,300-5,700 NAR	Max 1	Max 23	Max 18	Max 40		
CFR India East	TCAKS00	TCAKS03	TCAKS02	3,800 GAR	30-60 days	50,000	USD	Metric Ton	Daily	17.30 Singapore	0.3	6	39		3,600-4,000 GAR	Max 0.6	Max 8	Max 41	8,000 mt/day	Geared Supramax	
CFR India West	TCAKR00	TCAKR03	TCAKR02	3,800 GAR	30-60 days	50,000	USD	Metric Ton	Daily	17.30 Singapore	0.3	6	39		3,600-4,000 GAR	Max 0.6	Max 8	Max 41	8,000 mt/day	Geared Supramax	
CFR India East	TCAKU00	TCAKU03	TCAKU02	4,200 GAR	30-60 days	60,000	USD	Metric Ton	Daily	17.30 Singapore	0.6	7	35		4,000-4,400 GAR	Max 1	Max 10	Max 40	8,000 mt/day	Gearless Panamax	
CFR India West	TCAKT00	TCAKT03	TCAKT02	4,200 GAR	30-60 days	60,000	USD	Metric Ton	Daily	17.30 Singapore	0.6	7	35		4,000-4,400 GAR	Max 1	Max 10	Max 40	8,000 mt/day	Gearless Panamax	
CFR India East	TCAKJ00	TCAKJ03	TCAKJ05	5,000 GAR	30-60 days	Min 70,000	USD	Metric Ton	Daily	17.30 Singapore	0.8	8	26		4,800-5,200 GAR	Max 1	Max 12	Max 30	8,000 mt/day	Gearless Panamax	
CFR India West	TCAKP00	TCAKP03	TCAKP05	5,000 GAR	30-60 days	Min 70,000	USD	Metric Ton	Daily	17.30 Singapore	0.8	8	26		4,800-5,200 GAR	Max 1	Max 12	Max 30	8,000 mt/day	Gearless Panamax	
CFR India East	CIECI00	CIECI03	CIECI05	5,500 NAR	30-60 days	75,000	USD	Metric Ton	Daily	17.30 Singapore	0.8	20	8.5		5,300-5,700 NAR	Max 1	Max 23	Max 20	8,000 mt/day		

ASIA-PACIFIC THERMAL COAL ASSESSMENTS

Assessment	CODE	Mavg	Qavg	CV	Delivery period	Volume	Currency	UOM	Frequency	Timestamp	Specifications (Typical)				Specifications (Range)				Minimum Loadrate	Other Information
											Sulfur	Ash	Moisture	Volatiles	CV	Sulfur	Ash	Moisture		
CFR India West	CIWCI00	CIWCI03	CIWCI05	5,500 NAR	30-60 days	75,000	USD	Metric Ton	Daily	17.30 Singapore	0.8	20	8.5		5,300-5,700 NAR	Max 1	Max 23	Max 20		8,000 mt/day
FOB Russia Pacific	CSAKG00	CSAKG03	CSAKG04	6,300 GAR	90 days	75,000	USD	Metric Ton	Weekly	17.00 London	0.3	8	10	25	6,200-6,400 GAR	Max 0.4	Max 15	Max 14	Max 30	
FOB Russia Pacific	CSEU000			6,300 GAR	90 days	75,000	EUR	Metric Ton	Weekly	17.00 London	0.3	8	10	25	6,200-6,400 GAR	Max 0.4	Max 15	Max 14	Max 30	

ATLANTIC THERMAL COAL ASSESSMENTS

Assessment	CODE	Mavg	Qavg	CV	Delivery period	Volume (mt)	Currency	UOM	Frequency	Timestamp	Specifications (Typical)				Specifications (Range)		
											Sulfur %	Ash %	Moisture %	CV	Sulfur %	Ash %	Moisture %
CIF ARA	CSARM01	CSARN03	CSARN05	6,000 NAR	15-60 days	50,000	USD	Metric Ton	Daily	17.00 London	0.7	11	11	5,800-6,100 NAR	Max 1	Max 16	Max 14
CIF ARA	CSEUR00			6,000 NAR	15-60 days	50,000	EUR	Metric Ton	Daily	17.00 London	0.7	11	11	5,800-6,100 NAR	Max 1	Max 16	Max 14
FOB Richards Bay	AAXEX00	AAXEX03	AAXEX02	5,500 NAR	7-45 days	75,000	USD	Metric Ton	Daily	17.00 London	0.8	20	8.5	5,300-5,700 NAR	Max 1	17-23	Max 13
FOB Richards Bay	AAXEY00			5,500 NAR	7-45 days	75,000	EUR	Metric Ton	Daily	17.00 London	0.8	20	8.5	5,300-5,700 NAR	Max 1	17-23	Max 13
CIF Turkey	CTCMT04	CTCMT03	CTCMT05	6,000 NAR	90 days	75,000	USD	Metric Ton	Weekly	17.00 London	0.8	11	13	5,850-6,300 NAR	0.5-1	6-15	10-15
CIF Turkey	CTCME04			6,000 NAR	90 days	75,000	EUR	Metric Ton	Weekly	17.00 London	0.8	11	13	5,850-6,300 NAR	0.5-1	6-15	10-15
FOB Colombia	CSABZ00	CSABZ03	CSABZ04	6,000 NAR	90 days	75,000	USD	Metric Ton	Weekly	17.00 London	0.75	10	12	5,750-6,100 NAR	Max 0.9	Max 12	Max 15
FOB Colombia	CSEUC00			6,000 NAR	90 days	75,000	EUR	Metric Ton	Weekly	17.00 London	0.75	10	12	5,750-6,100 NAR	Max 0.9	Max 12	Max 15
FOB Russia Baltic	CSAKC00	CSAKC03	CSAKC04	6,000 NAR	90 days	75,000	USD	Metric Ton	Weekly	17.00 London	0.5	8	10	5,800-6,100 NAR	Max 1	Max 16	Max 14
FOB Russia Baltic	CSEUL00			6,000 NAR	90 days	75,000	EUR	Metric Ton	Weekly	17.00 London	0.5	8	10	5,800-6,100 NAR	Max 1	Max 16	Max 14

ASIA-PACIFIC AND ATLANTIC THERMAL COAL LOCATIONS

Assessment	Basis Port	All Ports	Normalized Volume (mt)
Atlantic			
CIF ARA	Rotterdam	Amsterdam, Rotterdam, Antwerp	50,000
FOB Richards Bay 5,500 NAR	RBCT (South Africa)	RBCT, Durban, Matola Coal Terminal (Maputo)	75,000
CIF Turkey	ICDAS (Marmara)	ICDAS, Colakoglu OVA, Eren Enerji, Isken Enerji, Akcansa	75,000
FOB Colombia	Puerto Bolivar	Puerto Bolivar, Puerto Drummond, Puerto Nuevo, Rio Cordoba, Carbosan	75,000
FOB Russia Baltic	Ventspils	St. Petersburg, Vyborg, Vysotsk, Ust-Luga, Kaliningrad (Russia), Tallinn (Estonia), Ventspils, Riga, Liepaja (Latvia), Klaipeda (Lithuania)	75,000
FOB Baltimore	Baltimore	Baltimore	
FOB Hampton Roads	Norfolk	Newport News, Norfolk	
FOB New Orleans	NOLA	NOLA, Mobile	
Asia Pacific			
NEAT Coal Index	Kinuura [Japan]	Yokkaichi, Nagoya, Yokohama, Onahama, Fukuyama, Haramach, Boryeong, Dangjin, Hadong, Taeon, Youngheung, Samcheonpo, Mailiao, Taichung, Hsinta, Kaohsiung	75,000
FOB Newcastle	Newcastle	Newcastle (New South Wales, Australia)	50,000
FOB Kalimantan	Banjarmasin	Samarinda, Balikpapan, Banjarmasin, Taboneo, Tanjung Pemancingan, Muara Satui, Indonesia Bulk Terminal	50,000
FOB Qinhuangdao (PCC 1)	Qinhuangdao	Including but not exclusive to Caofedian, Jingtang, Tianjin, Qinhuangdao	25,000
FOB Qinhuangdao (PCC 2)	Qinhuangdao	Including but not exclusive to Caofedian, Jingtang, Tianjin, Qinhuangdao	40,000
CFR S China (PCC 6 & 7)	Guangzhou	Including but not exclusive to Fangcheng, Shenzhen, Xiamen, Zhanjiang, Zhuhai, Guangzhou	40,000
CFR S China (PCC 8)	Guangzhou	Including but not exclusive to Fangcheng, Shenzhen, Xiamen, Zhanjiang, Zhuhai, Guangzhou	25,000
CFR India East 3,800 GAR	Krishnapatnam	Tuticorin, Kakinada, Paradip, Gangavaram, Visakhapatnam, Krishnapatnam, Haldia	50,000
CFR India East 4,200 GAR	Krishnapatnam	Tuticorin, Kakinada, Paradip, Gangavaram, Visakhapatnam, Krishnapatnam, Haldia	60,000
CFR India West 3,800 GAR	Kandla	Mundra, New Mangalore, Kandla, Muldwarka, Bhavnagar, Pipavav, Goa, Magdalla, Hazira, Dahej, Bedi, Navlakhi	50,000
CFR India West 4,200 GAR	Mundra	Mundra, New Mangalore, Kandla, Muldwarka, Bhavnagar, Pipavav, Goa, Magdalla, Hazira, Dahej, Bedi, Navlakhi	60,000
CFR India East 5,000 GAR	Krishnapatnam	Tuticorin, Kakinada, Paradip, Gangavaram, Visakhapatnam, Krishnapatnam, Haldia	70,000
CFR India West 5,000 GAR	Mundra	Mundra, New Mangalore, Kandla, Muldwarka, Bhavnagar, Pipavav, Goa, Magdalla, Hazira, Dahej, Bedi, Navlakhi	70,000
CFR India East 5,500 NAR	Krishnapatnam	Tuticorin, Kakinada, Paradip, Gangavaram, Visakhapatnam, Krishnapatnam, Haldia	75,000
CFR India West 5,500 NAR	Mundra	Mundra, New Mangalore, Kandla, Muldwarka, Bhavnagar, Pipavav, Goa, Magdalla, Hazira, Dahej, Bedi, Navlakhi	75,000
FOB Russia Pacific	Vostochny	Nakhodka, Posyet, Vanino, Vladivostok, Vostochny	75,000

Platts Asia Pacific and Atlantic thermal coal assessments

Platts publishes Asia Pacific and Atlantic thermal coal price assessments on a forward delivery/loading basis and on either a daily or weekly frequency.

Assessments reflect the transactable value in US dollars per metric ton prevailing at a specific timestamp on a market on close basis (unless otherwise stated (e.g. RMB): see Asia-Pacific specs table for details). Trading activity, including bids/offers and transactions, is covered during the typical operating day with data cut off for inclusion in the assessment precisely at the market-on-close timestamp.

Platts considers as relevant to the assessment process coals of a merchantable quality in a defined range of specifications including but not limited to calorific value, sulfur content, ash content and moisture content and normalizes to the standard specifications.

Volume: The assessments reflect cargoes of a typical volume in metric tons (mt). All shipment volumes, including standard or typical split and part-sized cargoes, are normalized to a typical vessel for seaborne delivery.

Basis and Location: Platts normalizes deliveries to or from the basis location in the standard as stated for each location. Platts defines base locations in its price assessments which act as a pricing basis point and differentials may be assessed off these when deals or bids/offers are reported on a different location basis.

Timing: The assessments reflect the value of coal loading/discharging at the basis location at the mid-point of a defined time period forward from the date of publication. Cargoes traded with more prompt or further forward laycans or NOR are normalized to the middle of the period for assessment purposes.

Daily 15-60 day CIF delivery window: The assessments reflect the price of coal for delivery 15-60 days forward from the date of publication (expected notice of readiness -NOR - will be taken as the date of arrival). For example, on January 2, Platts assesses cargoes for delivery between January 17 and March 2.

Daily 7-45 day FOB loading window: Assessments reflect the price of coal for delivery 7-45 days forward from the date of publication. For example, on January 2, Platts assesses cargoes for delivery between January 9 and February 15.

Weekly 90-day delivery window: Assessments reflect the value of coal loading at the basis location in the next 90-day period

forward from the date of publication. The 90-day assessment window rolls forward every week. For example, for the price being assessed on July 1, Platts assesses cargoes for loading from July 1 to September 30 but as of July 8 it will be from July 8 to October 7.

Monthly and Quarterly Averages: As an indicator of coal market trends, Platts calculates the mathematical average of its Asia-Pacific and Atlantic forward coal price assessments during two previous months and three previous quarters. Averages include all assessments made within the calendar period; the period of assessment is noted in the column heading of the Monthly and Quarterly Averages for Platts Forward Benchmark Coal Price Assessments table published every Friday or in the case of a public holiday, the nearest preceding business day.

Other information

Ash Differential: As part of the normalization process, Platts where stated publishes a differential, expressed in both a percentage and a \$/mt value, for each 1 percentage point of ash within a standard range. This differential is assessed regularly and adjusted as needed as part of the standard daily assessment process to maintain its reflection of market values.

US THERMAL COAL ASSESSMENTS

Type	Assessment	CODE	CV (Btu/lb GAR)	Delivery period	Volume (st)	Currency	UOM	Frequency	Timestamp	SO2 lbs Mode	Specifications (Typical)			Specifications (Range)				
											Sulfur %	Ash %	Moisture %	CV (Btu/lb GAR)	Sulfur %	Ash %	Moisture %	Chlorine %
Daily OTC	CAPP rail (CSX) OTC	CAKM001	12,500	Prompt Month	11,000	USD	Short Ton	Daily	2:30 pm Eastern 1.6	Rail	1	12	7	Min 12,200	Max 1	Max 13.5	-	-
Daily OTC	CAPP rail (CSX) OTC	CAKQ001	12,500	Prompt Quarter	11,000	USD	Short Ton	Daily	2:30 pm Eastern 1.6	Rail	1	12	7	Min 12,200	Max 1	Max 13.5	-	-
Daily OTC	PRB 8,800 OTC	CTAM001	8,800	Prompt Month	15,000	USD	Short Ton	Daily	2:30 pm Eastern 0.8	Rail	0.35	5.5	27	Min 8,600	Max 0.53	-	-	-
Daily OTC	PRB 8,800 OTC	CTAQ001	8,800	Prompt Quarter	15,000	USD	Short Ton	Daily	2:30 pm Eastern 0.8	Rail	0.35	5.5	27	Min 8,600	Max 0.53	-	-	-
Daily OTC	PRB 8,400 OTC	CTBM001	8,400	Prompt Month	15,000	USD	Short Ton	Daily	2:30 pm Eastern 0.8	Rail	0.34	5.5	30	Min 8,200	Max 0.50	-	-	-
Daily OTC	PRB 8,400 OTC	CTBQ001	8,400	Prompt Quarter	15,000	USD	Short Ton	Daily	2:30 pm Eastern 0.8	Rail	0.34	5.5	30	Min 8,200	Max 0.50	-	-	-
Daily OTC	IB 11,800 OTC	CTPM001	11,800	Prompt Month	8,750	USD	Short Ton	Daily	2:30 pm Eastern 5	Barge	2.95	-	-	11,500-12,000	Max 3.54	-	-	Max 0.35
Daily OTC	IB 11,800 OTC	CTPQ001	11,800	Prompt Quarter	8,750	USD	Short Ton	Daily	2:30 pm Eastern 5	Barge	2.95	-	-	11,500-12,000	Max 3.54	-	-	Max 0.35
Platts Daily Physical Coal Assessments	CAPP rail (CSX) OTC	CTJBM01	12,500	Final Monthly Average	11,000	USD	Short Ton	Daily	2:30 pm Eastern 1.6	Rail	1	12	7	Min 12,200	Max 1	Max 13.5	-	-
Platts Daily Physical Coal Assessments	CAPP rail (CSX) OTC	CTJM001	12,500	Prompt Month Daily Assessment	11,000	USD	Short Ton	Daily	2:30 pm Eastern 1.6	Rail	1	12	7	Min 12,200	Max 1	Max 13.5	-	-
Platts Daily Physical Coal Assessments	CAPP rail (CSX) OTC	CTNA003	12,500	Prompt Month Daily Average	11,000	USD	Short Ton	Daily	2:30 pm Eastern 1.6	Rail	1	12	7	Min 12,200	Max 1	Max 13.5	-	-
Platts Daily Physical Coal Assessments	CAPP rail (CSX) OTC	CTJBQ01	12,500	Final Quarterly Average	11,000	USD	Short Ton	Daily	2:30 pm Eastern 1.6	Rail	1	12	7	Min 12,200	Max 1	Max 13.5	-	-
Platts Daily Physical Coal Assessments	CAPP rail (CSX) OTC	CTJQ001	12,500	Prompt Quarter Daily Assessment	11,000	USD	Short Ton	Daily	2:30 pm Eastern 1.6	Rail	1	12	7	Min 12,200	Max 1	Max 13.5	-	-
Platts Daily Physical Coal Assessments	CAPP rail (CSX) OTC	CTNA005	12,500	Prompt Quarter Daily Average	11,000	USD	Short Ton	Daily	2:30 pm Eastern 1.6	Rail	1	12	7	Min 12,200	Max 1	Max 13.5	-	-
Platts Daily Physical Coal Assessments	PRB 8,800 OTC	CTKBM01	8,800	Final Monthly Average	15,000	USD	Short Ton	Daily	2:30 pm Eastern 0.8	Rail	0.35	5.5	27	Min 8,600	Max 0.53	-	-	-
Platts Daily Physical Coal Assessments	PRB 8,800 OTC	CTKM001	8,800	Prompt Month Daily Assessment	15,000	USD	Short Ton	Daily	2:30 pm Eastern 0.8	Rail	0.35	5.5	27	Min 8,600	Max 0.53	-	-	-
Platts Daily Physical Coal Assessments	PRB 8,800 OTC	CTNAP03	8,800	Prompt Month Daily Average	15,000	USD	Short Ton	Daily	2:30 pm Eastern 0.8	Rail	0.35	5.5	27	Min 8,600	Max 0.53	-	-	-
Platts Daily Physical Coal Assessments	PRB 8,800 OTC	CTKBQ01	8,800	Final Quarterly Average	15,000	USD	Short Ton	Daily	2:30 pm Eastern 0.8	Rail	0.35	5.5	27	Min 8,600	Max 0.53	-	-	-
Platts Daily Physical Coal Assessments	PRB 8,800 OTC	CTKQ001	8,800	Prompt Quarter Daily Assessment	15,000	USD	Short Ton	Daily	2:30 pm Eastern 0.8	Rail	0.35	5.5	27	Min 8,600	Max 0.53	-	-	-
Platts Daily Physical Coal Assessments	PRB 8,800 OTC	CTNAP05	8,800	Prompt Quarter Daily Average	15,000	USD	Short Ton	Daily	2:30 pm Eastern 0.8	Rail	0.35	5.5	27	Min 8,600	Max 0.53	-	-	-
Platts Daily Physical Coal Assessments	PRB 8,400 OTC	CTLBM01	8,400	Final Monthly Average	15,000	USD	Short Ton	Daily	2:30 pm Eastern 0.8	Rail	0.34	5.5	30	Min 8,200	Max 0.50	-	-	-
Platts Daily Physical Coal Assessments	PRB 8,400 OTC	CTLM001	8,400	Prompt Month Daily Assessment	15,000	USD	Short Ton	Daily	2:30 pm Eastern 0.8	Rail	0.34	5.5	30	Min 8,200	Max 0.50	-	-	-
Platts Daily Physical Coal Assessments	PRB 8,400 OTC	CTNAR03	8,400	Prompt Month Daily Average	15,000	USD	Short Ton	Daily	2:30 pm Eastern 0.8	Rail	0.34	5.5	30	Min 8,200	Max 0.50	-	-	-

US THERMAL COAL ASSESSMENTS

Type	Assessment	CODE	CV (Btu/lb GAR)	Delivery period	Volume (st)	Currency	UOM	Frequency	Timestamp	SO2 lbs	Mode	Specifications (Typical)			Specifications (Range)				
												Sulfur %	Ash %	Moisture %	CV (Btu/lb GAR)	Sulfur %	Ash %	Moisture %	Chlorine %
Platts Daily Physical Coal Assessments	PRB 8,400 OTC	CTLBQ01	8,400	Final Quarterly Average	15,000	USD	Short Ton	Daily	2:30 pm Eastern	0.8	Rail	0.34	5.5	30	Min 8,200	Max 0.50	-	-	-
Platts Daily Physical Coal Assessments	PRB 8,400 OTC	CTLQ001	8,400	Prompt Quarter Daily Assessment	15,000	USD	Short Ton	Daily	2:30 pm Eastern	0.8	Rail	0.34	5.5	30	Min 8,200	Max 0.50	-	-	-
Platts Daily Physical Coal Assessments	PRB 8,400 OTC	CTNAR05	8,400	Prompt Quarter Daily Average	15,000	USD	Short Ton	Daily	2:30 pm Eastern	0.8	Rail	0.34	5.5	30	Min 8,200	Max 0.50	-	-	-
Platts Daily Physical Coal Assessments	IB 11,800 OTC	CTOTC00	11,800	Final Monthly Average	8,750	USD	Short Ton	Daily	2:30 pm Eastern	5	Barge	2.95	-	-	11,500-12,000	Max 3.54	-	-	Max 0.35
Platts Daily Physical Coal Assessments	IB 11,800 OTC	CTPM001	11,800	Prompt Month Daily Assessment	8,750	USD	Short Ton	Daily	2:30 pm Eastern	5	Barge	2.95	-	-	11,500-12,000	Max 3.54	-	-	Max 0.35
Platts Daily Physical Coal Assessments	IB 11,800 OTC	CTPHP03	11,800	Prompt Month Daily Average	8,750	USD	Short Ton	Daily	2:30 pm Eastern	5	Barge	2.95	-	-	11,500-12,000	Max 3.54	-	-	Max 0.35
Platts Daily Physical Coal Assessments	IB 11,800 OTC	CUOTC00	11,800	Final Quarterly Average	8,750	USD	Short Ton	Daily	2:30 pm Eastern	5	Barge	2.95	-	-	11,500-12,000	Max 3.54	-	-	Max 0.35
Platts Daily Physical Coal Assessments	IB 11,800 OTC	CTPQ001	11,800	Prompt Quarter Daily Assessment	8,750	USD	Short Ton	Daily	2:30 pm Eastern	5	Barge	2.95	-	-	11,500-12,000	Max 3.54	-	-	Max 0.35
Platts Daily Physical Coal Assessments	IB 11,800 OTC	CTPHP05	11,800	Prompt Quarter Daily Average	8,750	USD	Short Ton	Daily	2:30 pm Eastern	5	Barge	2.95	-	-	11,500-12,000	Max 3.54	-	-	Max 0.35
Weekly Price Survey	Pittsburgh Seam	CPAQ001	13,000	Prompt Quarter	-	USD	Short Ton	Weekly	2 pm Eastern	<3	Rail	<1.95	-	-	-	-	-	-	-
Weekly Price Survey	Pittsburgh Seam	CNDQ001	13,000	Prompt Quarter	-	USD	Short Ton	Weekly	2 pm Eastern	4	Rail	2.6	-	-	-	-	-	-	-
Weekly Price Survey	Upper Ohio River	CNEQ001	12,500	Prompt Quarter	-	USD	Short Ton	Weekly	2 pm Eastern	6+	Barge	>3.75	-	-	-	-	-	-	-
Weekly Price Survey	CAPP barge physical	CNNQ001	12,000	Prompt Quarter	-	USD	Short Ton	Weekly	2 pm Eastern	1.67	Barge	1	-	-	-	-	-	-	-
Weekly Price Survey	CAPP rail (CSX) physical	CAEQ001	12,500	Prompt Quarter	-	USD	Short Ton	Weekly	2 pm Eastern	1.6	CSX	1	-	-	-	-	-	-	-
Weekly Price Survey	Thacker/Kenova	CAGQ001	12,500	Prompt Quarter	-	USD	Short Ton	Weekly	2 pm Eastern	1.6	NS	0.94	-	-	-	-	-	-	-
Weekly Price Survey	Illinois Basin	CIAQ001	11,800	Prompt Quarter	-	USD	Short Ton	Weekly	2 pm Eastern	5	Rail	2.95	-	-	-	-	-	-	Max 0.2
Weekly Price Survey	Illinois Basin	CIJQ001	11,800	Prompt Quarter	-	USD	Short Ton	Weekly	2 pm Eastern	5	Barge	2.95	-	-	-	-	-	-	Max 0.2
Weekly Price Survey	Illinois Basin	CIEQ001	11,500	Prompt Quarter	-	USD	Short Ton	Weekly	2 pm Eastern	5	Barge	2.88	-	-	-	-	-	-	Max 0.2
Weekly Price Survey	Illinois Basin	CISQ001	11,500	Prompt Quarter	-	USD	Short Ton	Weekly	2 pm Eastern	5	Barge	2.88	-	-	-	-	-	-	Max 0.35
Weekly Price Survey	Illinois Basin	CICQ001	11,000	Prompt Quarter	-	USD	Short Ton	Weekly	2 pm Eastern	5	Barge	2.75	-	-	-	-	-	-	Max 0.2
Weekly Price Survey	Powder River Basin	CRAQ001	8,800	Prompt Quarter	-	USD	Short Ton	Weekly	2 pm Eastern	0.8	Rail	0.35	-	-	-	-	-	-	-
Weekly Price Survey	Powder River Basin	CRBQ001	8,400	Prompt Quarter	-	USD	Short Ton	Weekly	2 pm Eastern	0.8	Rail	0.34	-	-	-	-	-	-	-
Weekly Price Survey	Colorado	CUAQ001	11,700	Prompt Quarter	-	USD	Short Ton	Weekly	2 pm Eastern	0.8	Rail	0.47	-	-	-	-	-	-	-
Weekly Price Survey	Colorado	CURQ001	11,300	Prompt Quarter	-	USD	Short Ton	Weekly	2 pm Eastern	0.8	Rail	0.45	-	-	-	-	-	-	-
Weekly Price Survey	Utah	CUDQ001	11,500	Prompt Quarter	-	USD	Short Ton	Weekly	2 pm Eastern	0.8	Rail	0.46	-	-	-	-	-	-	-
US FOB Assessments	FOB Baltimore	CUATB04	6900 kcal/kg NAR	15-60 days	-	USD	Metric Ton	Weekly	11:30 am Eastern	4	FOB Vessel	3							
US FOB Assessments	FOB Baltimore	CUADA04	6000 kcal/kg NAR	15-60 days	-	USD	Metric Ton	Weekly	11:30 am Eastern	4	FOB Vessel	3							
US FOB Assessments	FOB Hampton Roads	CUAEA04	6000 kcal/kg NAR	15-60 days	-	USD	Metric Ton	Weekly	11:30 am Eastern	1.6	FOB Vessel	1							
US FOB Assessments	FOB New Orleans	CUAFA04	6000 kcal/kg NAR	15-60 days	-	USD	Metric Ton	Weekly	11:30 am Eastern	5	FOB Vessel	2.9							

US PHYSICAL THERMAL COAL NETBACKS

Netbacks (\$/st)	Symbol	CV (Btu/lb)	Basis	Sulfur
FOB US East Coast	COUSC00	12,500	GAR	1.0%
FOB US Gulf Coast	COUGU00	11,500	GAR	2.9%
FOB Vancouver	COVCU00	8,800	GAR	0.8%
Penalties & Premia (\$/mt)				
Per 0.1% Sulfur (USGC)	COPAP00			
Total S discount (USGC)	COPBP00			

Platts US thermal coal assessments

Platts assesses a variety of US coal on a daily, weekly and netback basis. Heat and sulfur content are considered the primary determinants of physical thermal coal price. Assessments should be considered a composite of physical characteristics of available coals in the region and are not intended to represent a particular grade or brand of a given producer. See the US Thermal Coal Specifications Table for further details.

Daily assessments

Platts assesses prices on a daily basis for four standardized US coal specifications that reflect the physical, over-the-counter price for front-month and front-quarter delivery. The four specifications are CAPP rail (CSX) OTC, PRB 8,800 OTC, PRB 8,400 OTC and Illinois Basin 11,800 OTC. Details for each specification are listed in the US Thermal Coal Specifications Table.

Platts also publishes a running average of the daily prompt month and prompt quarter physical assessments as well as the final average for the previous prompt month and prompt quarter.

Daily assessments are priced in US \$/short ton based on FOB quotes at the rail or barge origin point.

The assessments are based on bids, offers and trades, indications of market value, expressions of interest and movements in related markets that are confirmed to have occurred no later than 2:30 pm Eastern.

Platts will consider all trades for inclusion in its OTC assessments, including bilateral, non-brokered deals that are confirmed by at least one counterparty, are verified to conform to the relevant quality specifications, are free of adjustments based on credit or other special requirements and are confirmed to have taken place no later than 2:30 pm Eastern.

Platts gathers and publishes heards, including bids, offers

and trades, from a variety of market participants throughout the day.

At 2 pm Eastern, Platts will publish an initial market value for the front-month for the following three assessments: CAPP Rail (CSX) OTC, PRB 8,800 OTC and Illinois Basin 11,800 OTC. The initial market value will be based on published data heard through 2 pm, and will be based on bids, offers, trades, indications of market value, expressions of interest and movements in related markets.

From 2 to 2:30 pm Eastern, Platts will continue to gather and publish market data, but may not consider any data gathered after 2:30 pm as relevant for the three indicated assessments. Platts will base its assessments on published market data that has been sufficiently tested in the market and determined to be the best indicator of price as of 2:30 pm.

Firm bids and offers that are available to the entire market as of 2:30 pm Eastern take precedence over trades that have been concluded earlier in the assessment process, particularly if bids are available at the close above previously traded levels, or offers are available to the market below previously traded levels.

When no confirmed bid, offer or transaction data is heard after 2 pm, Platts will base its assessments on the initial market values which have been made available and tested in the market from 2 pm.

For the front-month assessment for PRB 8,400 OTC, as well as the front-quarter assessments for PRB 8,400 OTC, PRB 8,800 OTC, CAPP rail (CSX) OTC and Illinois Basin 11,800 OTC, Platts will use market data, which may include broker marks, to determine price as of 2:30 pm.

The daily assessments roll on the 26th of each month. For example, for assessments for trade date February 25, the prompt month is March. On February 26, April becomes the prompt month. When the 25th falls on a weekend or a holiday,

the last business day preceding the 25th becomes the final day for that prompt month. When the 26th falls on a weekend or a holiday, the new prompt month begins on the first business day following the 26th.

Monthly averages for the four daily physical OTC coal assessments comprise all assessments made between the 26th of the preceding month and the 25th of the following month.

Weekly Methodology

Platts assesses prices on a weekly basis for 16 US coal specifications from all major US producing regions that reflect physical spot and term coal for front-quarter delivery. The prices reflect bids, offers, deals, and other market data collected throughout the week.

Weekly assessments are priced in US \$/short ton based on FOB quotes at the rail or barge origin point.

The weekly assessments reflect value as of 2 pm Eastern time on the final business day of the week.

The weekly physical assessments roll at the end of each calendar quarter.

US Thermal Coal Netbacks

Platts US thermal coal netbacks reflect the daily value for US thermal coal on an FOB basis at three locations.

FOB US East Coast (basis 12,500 Btu/lb GAR, 1% sulfur) shows the price of US thermal coal compared to CIF ARA coal (basis 6,000 kcal/kg NAR, 1% sulfur), minus the Panamax freight rate from the US East Coast to Rotterdam. The netback is adjusted for heat at the originating port (CIF ARA minus freight divided by 6,000 kcal/kg NAR then multiplied by 6,667 kcal/kg NAR, the calorific heat content of 12,500 Btu/lb GAR coal). The resulting value is then converted from \$/mt into \$/st.

FOB US Gulf Coast (basis 11,500 Btu/lb GAR, 2.9% sulfur) shows the price of US thermal coal compared to CIF ARA coal (basis 6,000 kcal/kg NAR, 1% sulfur) minus the Panamax freight rate from Mobile, Alabama to Rotterdam. The netback is adjusted for heat at originating port (CIF ARA minus freight divided by 6,000 kcal/kg NAR then multiplied by 6,111 kcal/kg NAR, the calorific heat content of 11,500 Btu/lb GAR coal). The netback is then adjusted based on sulfur content, and the resulting value is then converted from \$/mt to \$/st.

FOB Vancouver (basis 8,800 Btu/lb GAR, 0.8% sulfur) shows the price of US thermal coal compared to the NEAT Coal Index (basis 5,750 kcal/kg NAR, 0.6% sulfur) minus the Panamax freight rate from Roberts Bank, British Columbia to Japan. The netback is adjusted for heat at the originating port (NEAT Coal Index minus freight divided by 5,750 kcal/kg

NAR then multiplied by 4,611 kcal/kg NAR, the calorific heat content of 8,800 Btu/lb GAR coal). The resulting value is then converted from \$/mt into \$/st.

US FOB Assessments

Platts US FOB assessments reflect the weekly value for US thermal coal on an FOB basis at the export terminal at three locations: FOB Baltimore (basis 6,000 kcal/kg NAR, 3% sulfur), FOB Hampton Roads (basis 6,000 kcal/kg NAR, 1% sulfur) and FOB New Orleans (basis 6,000 kcal/kg NAR, 2.9% sulfur). The FOB Baltimore assessment is also normalized to 6,000 kcal/kg. The FOB assessments are listed in \$/mt, and are based on a 15-60 day loading period. The assessments reflect the market as of 11:30 am Eastern on the final business day of the week.

FORWARD CURVE ASSESSMENTS

Assessment	CODE	CV	Delivery period	Currency	UOM	Frequency	Timestamp
CIF ARA	CSAM001	6,000 NAR	Prompt Month	USD	Metric Ton	Daily	17.00 London
CIF ARA	CSAM002	6,000 NAR	Prompt Month + 1	USD	Metric Ton	Daily	17.00 London
CIF ARA	CSAQ001	6,000 NAR	Prompt Quarter	USD	Metric Ton	Daily	17.00 London
CIF ARA	CSAQ002	6,000 NAR	Prompt Quarter +1	USD	Metric Ton	Daily	17.00 London
CIF ARA	CSAQ003	6,000 NAR	Prompt Quarter + 2	USD	Metric Ton	Daily	17.00 London
CIF ARA	CSAQ004	6,000 NAR	Prompt Quarter +3	USD	Metric Ton	Daily	17.00 London
CIF ARA	CSAY001	6,000 NAR	Prompt Calendar	USD	Metric Ton	Daily	17.00 London
CIF ARA	CSAY002	6,000 NAR	Prompt Calendar +1	USD	Metric Ton	Daily	17.00 London
CIF ARA	CSAY003	6,000 NAR	Prompt Calendar +2	USD	Metric Ton	Daily	17.00 London
FOB Newcastle	CSCM001	6,000 NAR	Prompt Month	USD	Metric Ton	Daily	17.00 London
FOB Newcastle	CSCM002	6,000 NAR	Prompt Month + 1	USD	Metric Ton	Daily	17.00 London
FOB Newcastle	CSCQ001	6,000 NAR	Prompt Quarter	USD	Metric Ton	Daily	17.00 London
FOB Newcastle	CSCQ002	6,000 NAR	Prompt Quarter +1	USD	Metric Ton	Daily	17.00 London
FOB Newcastle	CSCQ003	6,000 NAR	Prompt Quarter + 2	USD	Metric Ton	Daily	17.00 London
FOB Newcastle	CSCQ004	6,000 NAR	Prompt Quarter +3	USD	Metric Ton	Daily	17.00 London
FOB Newcastle	CSCY001	6,000 NAR	Prompt Calendar	USD	Metric Ton	Daily	17.00 London
FOB Newcastle	CSCY002	6,000 NAR	Prompt Calendar +1	USD	Metric Ton	Daily	17.00 London
FOB Newcastle	CSCY003	6,000 NAR	Prompt Calendar +2	USD	Metric Ton	Daily	17.00 London

Financial thermal coal assessments

Platts Forward Curve-Coal assesses the prevailing forward prices for two standardized coal derivative contracts in Europe and Asia. The contracts are:

- CIF ARA (Rotterdam) contract based on 6,000 kcal/kg, net as received.
- FOB Newcastle, Australia contract based on 6,000 kcal/kg net as received.

Prices (expressed as US dollars per metric ton) are assessed for the forward two months, four quarters and three years and represent a market-on-close value, and include actual transactions, where discoverable, and bids/offers each day.

Timing: The months roll forward on the 1st day of each month or the nearest business day thereafter; the quarters roll forward on the first day of the calendar quarter or the nearest business day thereafter, and the forward years on January 1 or the nearest business day thereafter.

For example, on January 2, Platts assesses the two forward months February and March, the four forward quarters Q2, Q3 and Q4 of the current year and Q1 of the next year and the three forward years will be the next three calendar years.

Prices reflect transactable value at market on close, reflecting the product value at market closing at 17:00 London time daily. Transactions done after closing time are disregarded.

PETROLEUM COKE ASSESSMENTS

Assessment	CODE	Mavg	Qavg	Delivery period	Volume (mt)	Currency	UOM	Frequency	Timestamp	CV	Specifications (Typical)		Specifications (Range)		
											Sulfur %	HGI	CV	Sulfur %	HGI
FOB US Gulf Coast High Sulfur	CPAAA00	CPAAA03	CPAAA05	15-45 days	10,000	USD	Metric Ton	Weekly	11.00 US Eastern	-	6.5	-	-	5.5-7	-
FOB US Gulf Coast Mid Sulfur	CPAAF00	CPAAF03	CPAAF05	15-45 days	10,000	USD	Metric Ton	Weekly	11.00 US Eastern	-	4.5	-	-	4.0-5	-
FOB US West Coast Mid Sulfur	CPAAC00	CPAAC03	CPAAC05	15-45 days	10,000	USD	Metric Ton	Weekly	11.00 US Eastern	-	3	-	-	2.5-4.5	-
FOB US West Coast Low Sulfur	CPAGG00	CPAGG03	CPAGG05	15-45 days	10,000	USD	Metric Ton	Weekly	11.00 US Eastern	-	2	-	-	1-2.5	-
CIF Turkey 5% Sulfur	CPAGH00	CPAGH03	CPAGH05	30-60 days	50,000	USD	Metric Ton	Weekly	16.30 London	7,500 NAR	5	50	7,000-8,000 NAR	4-5.5	30-80
CFR India West 6.5% Sulfur	CPAGJ00	CPAGJ03	CPAGJ05	30-60 days	50,000	USD	Metric Ton	Weekly	17.30 Singapore	7,500 NAR	6.5	40	7,000-8,000 NAR	6-8	38-55
CFR India East 6.5% Sulfur	CPAGK00	CPAGK03	CPAGK05	30-60 days	50,000	USD	Metric Ton	Weekly	17.30 Singapore	7,500 NAR	6.5	40	7,000-8,000 NAR	6-8	38-55

PETCOKE LOCATION

Assessment	Basis Port	All Ports
US		
US Gulf Coast	Gulf Coast	Lower Mississippi River, Port Arthur, Houston, Upper Mississippi/Chicago
US West Coast	West Coast	Southern California, US West Coast ports
Turkey		
CIF Turkey	Iskenderun	Iskenderun, Izmir, Marmara, Samsun
India		
CFR India East	Krishnapatnam	All east coast India ports
CFR India West	Kandla	All west coast India ports

Platts petcoke assessments

Platts publishes petroleum coke price assessments on a forward delivery/loading basis on a weekly frequency every Wednesday (or in the case of a public holiday, the nearest preceding business day).

Assessments reflect the transactable value prevailing at a specific timestamp. Trading activity, including bids/offers and transactions, is covered during the typical operating day with data cut off for inclusion in the assessment precisely at the market-on-close timestamp.

Negotiations on current contracts may be taken into account for trend purposes. Deals and bids/offers must be deemed to be repeatable between typical counterparties. Platts assessments may also take into account market surveys as well as other relevant market data such as supply/demand constraints and prices in related markets (i.e. thermal coal, natural gas and residual fuel prices).

Platts considers as relevant to the assessment process petcoke of a merchantable quality in a defined range of specifications including but not limited to sulfur content and Hardgrove Grindability Index (HGI) and normalizes to the standard specifications. Sulfur content is considered the primary determinant of petcoke prices. The HGI, a measure for the grindability of coal and petcoke, is a secondary determinant and may be included in the price commentary each week if deals are heard that specify HGI.

Volume: The assessments reflect cargoes of a typical volume in metric tons (mt). All shipment volumes of 10,000 mt or over, including standard or typical split and part-sized cargoes, are normalized to a typical vessel size (e.g. 50,000 mt Supramax).

Basis and Location: Platts normalizes deliveries to or from the basis location in the standard for each location. Platts defines base locations in its price assessments which act as a pricing basis point, and differentials may be assessed off these when deals or bids/offers are reported on a different location basis.

Timing: The assessments reflect the value of petcoke loading/discharging at the basis location at the mid-point of a defined time period forward from the date of publication. Cargoes traded with more prompt or further forward laycans or notice of readiness are normalized to the middle of the period for assessment purposes.

Weekly 15-45 day FOB loading window: The assessments reflect the price of petcoke for loading 15-45 days forward from the date of publication. For example, on January 2, Platts assesses cargoes for delivery between January 16 and February 15.

Weekly 30-60 day CIF/CFR delivery window: The assessments reflect the price of petcoke for delivery 30-60 days forward from the date of publication (expected –NOR will be taken as the date of arrival). For example, on June 1, Platts assesses cargoes for delivery between June 30 and July 30.

CLEAN DARK SPREADS

	CODE	EFFICIENCY %	UOM
UK Clean Dark Spread MA	CCUTM00	35	EUR/MWh
UK Clean Dark Spread MA+1	CCUTM27	35	EUR/MWh
UK Clean Dark Spread QA	CCUTQ00	35	EUR/MWh
UK Clean Dark Spread QA+1	CCUTQ27	35	EUR/MWh
UK Clean Dark Spread SN	CCUTS00	35	EUR/MWh
UK Clean Dark Spread MA	CCUZM00	35	GBP/MWh
UK Clean Dark Spread MA+1	CCUZM27	35	GBP/MWh
UK Clean Dark Spread QA	CCUZQ00	35	GBP/MWh
UK Clean Dark Spread QA+1	CCUZQ27	35	GBP/MWh
UK Clean Dark Spread SN	CCUZS00	35	GBP/MWh
UK Clean Dark Spread CPS MA	CCHTM00	35	EUR/MWh
UK Clean Dark Spread CPS MA	CCHTM27	35	EUR/MWh
UK Clean Dark Spread CPS QA	CCHTQ00	35	EUR/MWh
UK Clean Dark Spread CPS QA+1	CCHTQ27	35	EUR/MWh
UK Clean Dark Spread CPS SN	CCHTS00	35	EUR/MWh
UK Clean Dark Spread CPS MA	CCHZM00	35	GBP/MWh
UK Clean Dark Spread CPS MA	CCHZM27	35	GBP/MWh
UK Clean Dark Spread CPS QA	CCHZQ00	35	GBP/MWh
UK Clean Dark Spread CPS QA+2	CCHZQ27	35	GBP/MWh
UK Clean Dark Spread CPS SN	CCHZS00	35	GBP/MWh
Germany Clean Dark Spread MA	CTGTM00	35	EUR/MWh
Germany Clean Dark Spread MA+1	CCGTM27	35	EUR/MWh
Germany Clean Dark Spread QA	CCGTQ00	35	EUR/MWh
Germany Clean Dark Spread QA+1	CCGTQ27	35	EUR/MWh
Germany Clean Dark Spread YA	CCGTY00	35	EUR/MWh
Germany Clean Dark Spread YA+1	CCGTY27	35	EUR/MWh
Germany Clean Dark Spread YA+2	CCGTY28	35	EUR/MWh
Germany Clean Dark Spread MA	CCGUM00	45	EUR/MWh
Germany Clean Dark Spread MA+1	CCGUM27	45	EUR/MWh
Germany Clean Dark Spread QA	CCGUQ00	45	EUR/MWh
Germany Clean Dark Spread QA+1	CCGUQ27	45	EUR/MWh
Germany Clean Dark Spread YA	CCGUY00	45	EUR/MWh
Germany Clean Dark Spread YA+1	CCGUY27	45	EUR/MWh
Germany Clean Dark Spread YA+2	CCGUY28	45	EUR/MWh

Other pricing data

Clean Dark Spreads

Platts clean dark spreads are indicative prices giving the average difference between the combined cost of coal and emissions allowances and the equivalent price of electricity on any given day.

Prices are quoted for the UK and German markets. Both UK and German clean dark spreads are based on CIF ARA coal assessments and equivalent UK and German electricity values as published in European Power Daily and European Power Alert and third party EUA emissions prices.

For the UK, Platts publishes clean dark spreads for two months ahead, two quarters ahead and one season ahead in Eur/MWh and GBP/MWh. For Germany, Platts publishes clean dark spreads for two months ahead, two quarters ahead and three calendar years ahead in Eur/MWh.

The formula for the UK and German clean dark spreads uses an energy conversion factor of 6.978 (converting 1 metric ton of 6,000 kcal/kg NAR coal into MWh), a fuel efficiency factor (coal) of 35% (and also 45% for Germany) and a carbon intensity factor of 0.973 mt of CO₂/MWh for 35% efficiency and 0.757 mtCO₂/MWh for 45% efficiency.

The full formula is as follows: Baseload power price in euro –

$$\left(\frac{\text{coal price in US dollar} \div \text{exchange rate}}{\text{energy conversion factor}} \right) \div \text{fuel efficiency factor} - (\text{EUA price in euro} \times \text{carbon intensity factor})$$

Platts also publishes UK CPS clean dark spreads that incorporate the cost of the UK government's Carbon Price Support (CPS) levy at the following confirmed rates:

Year Levy in GBP/mt of carbon

April 1, 2014 - March 31, 2015	9.55
April 1, 2015 - March 31, 2016	18.08
April 1, 2016 - March 31, 2017	18
April 1, 2017 - March 31, 2018	18
April 1, 2018 - March 31, 2019	18
April 1, 2019 - March 31, 2020	18

The full formula for CPS clean dark spreads is:

Platts UK dark spread in GBP/MWh at 35% fuel efficiency - (EUA emissions price in euro/mt converted to GBP + CPS levy in GBP/mt x emissions intensity factor 0.973).

Both Eur/MWh and \$/MWh conversions are available.

The EUA component of Platts dark spreads reflects a December annual expiry date.

Platts clean fuel spread calculations will typically reference the emissions contract most relevant to the delivery period for the fuel legs of the spread. In the UK, seasonal clean fuel spreads

that include delivery during winter periods which touch on two calendar years will use an average of two emissions contracts for the 'clean' component of the spread.

Platts clean fuel spread calculations incorporate three emissions contracts ahead with specifications and roll dates as listed on the European Energy Exchange (EEX).

Thermal Coal Netbacks

Platts Richards Bay FOB netback reflects the daily value for thermal coal CFR India West (basis 5,500 NAR, 0.8% sulfur) minus the Panamax freight rate from Richards Bay to India West. The netback is adjusted for calorific value at the destination (from 5,500 kcal/kg to 6,000 NAR basis) before an ash differential is applied to adjust from typical 20% ash for 5,500 NAR coal to typical 14% ash for 6,000 NAR coal and dry bulk freight is subtracted. The resulting value gives the calculated value of FOB Richards Bay (basis 6,000 NAR, 0.8% sulfur, 14% ash).

Netbacks (\$/mt)	Symbol	CV	Basis	Sulfur
FOB Richards Bay	CSEUW00	6000	NAR	0.008

The full formula is:

$$(\text{Platts CFR India West in } \$/\text{mt} - \text{Panamax freight Richards Bay-India West}) / 5,500 * 6,000 + (\text{Ash Differential } \$/\text{mt} * 6)$$

SPOT DRY BULK FREIGHT ASSESSMENTS PUBLISHED IN COAL TRADER INTERNATIONAL

	CODE	Currency	UOM
Capesize			
Australia-China	CDANC00	USD	Metric Ton
Queensland-Japan	CIGAJ00	USD	Metric Ton
New South Wales-Korea	CINAK00	USD	Metric Ton
Bolivar-Rotterdam	CIBCR00	USD	Metric Ton
Roberts Bank-Japan	CDRKJ00	USD	Metric Ton
Richards Bay-Rotterdam	CIRBN00	USD	Metric Ton
Panamax			
Richards Bay-India West	CSAKL00	USD	Metric Ton
Kalimantan-India West	CSAKP00	USD	Metric Ton
Richards Bay-India East	CSAKN00	USD	Metric Ton
Kalimantan-India East	CSAKR00	USD	Metric Ton
Richards Bay-Rotterdam	CIRRN00	USD	Metric Ton
Richards Bay-Spanish Med	CIRBT00	USD	Metric Ton
Richards Bay-Jorf Lasfar	CIRBJ00	USD	Metric Ton
Bolivar-Rotterdam	CIBRN00	USD	Metric Ton
USEC-India	CDBUI00	USD	Metric Ton
USEC-Rotterdam	CDBUR00	USD	Metric Ton
USEC-Brazil	CDBUB00	USD	Metric Ton
Mobile-Rotterdam	CDMAR00	USD	Metric Ton
Mobile-Taranto	CDMAI00	USD	Metric Ton
Roberts Bank-Japan	CDRBK00	USD	Metric Ton
Australia-China	CDBFA00	USD	Metric Ton
Australia-India	CDBFAI0	USD	Metric Ton

Spot dry bulk freight assessments

Please see our Freight/Shipping Methodology and Specifications Guide at <http://www.platts.com/methodology-specifications/shipping>.

METALLURGICAL COAL AND MET COKE ASSESSMENTS PUBLISHED IN COAL TRADER INTERNATIONAL

Asia-Pacific coking coal

	Currency	UOM	FOB Australia	CFR China	CFR India
HCC Peak Downs Region	USD	Metric ton	HCCGA00	HCCGC00	HCCGI00
Premium Low Vol	USD	Metric ton	PLVHA00	PLVHC00	PLVHI00
HCC 64 Mid Vol	USD	Metric ton	HCCAU00	HCCCH00	HCCIN00
Low Vol PCI	USD	Metric ton	MCLVA00	MCLVC00	MCLVI00
Mid Tier PCI	USD	Metric ton	MCLAA00	MCLAC00	MCVAI00
Semi Soft	USD	Metric ton	MCSSA00	MCSSC00	MCSSI00

Atlantic coking coal

	Currency	UOM	FOB US East Coast		
Low Vol HCC	USD	Metric ton	AAWR00	-	-
High Vol A	USD	Metric ton	AAWS00	-	-
High Vol B	USD	Metric ton	AAWT00	-	-
			CFR NW Europe		
PLV NetForward	USD	Metric ton	PLVHE00	-	-

Atlantic coking coal

	Currency	UOM	Ex-washplant	Free-on-Rail	DDP Tangshan
PCC Met Shanxi Premium Low Vol	Yuan	Metric ton	PCCMA04	PCCMB04	PCCMC04
PCC Met Shanxi High Sulfur Premium Low Vol	Yuan	Metric ton	PCCMD04	PCCME04	PCCMF04
PCC Met North China Fat Coal	Yuan	Metric ton	-	-	PCCMG04
PCC Met Shanxi PCI	Yuan	Metric ton	PCCMH04	PCCMI04	PCCMJ04
PCC Met Shandong Semi Soft	Yuan	Metric ton	PCCMK04	PCCML04	-
PCC Met Rail Freight Shanxi – Tangshan	Yuan	Metric ton	PCCMM04	-	-
PCC Met Truck Freight Shanxi – Tangshan	Yuan	Metric ton	PCCM004	-	-
PCC Met Shanxi Premium Low Vol (CFR China equivalent)	USD	Metric ton	PLVHJ04	-	-

North China prompt port stock prices

	Currency	UOM	EX-stock Jingtang incl VAT		
Premium Low Vol	Yuan	Metric ton	AAWZN00	-	-
HCC 64 Mid Vol	Yuan	Metric ton	AAWZP00	-	-
			CFR Jingtang equivalent		
Premium Low Vol	USD	Metric ton	AAWZ000	-	-
HCC 64 Mid Vol	USD	Metric ton	AAWZQ00	-	-

METALLURGICAL COAL AND MET COKE ASSESSMENTS PUBLISHED IN COAL TRADER INTERNATIONAL

China PLV, Met Coke Price Differentials

	Currency	UOM				
Import-Shanxi Premium Low Vol CFR China	USD	Metric ton	PLVHK04	-	-	-
Import-port stock Premium Low Vol CFR China	USD	Metric ton	PLVHL04	-	-	-
62% CSR coke export-domestic FOB North China	USD	Metric ton	PLVHN04	-	-	-

Penalties & Premia: Differentials

	Currency	UOM	Within Min-Max		% of Premium Low Vol FOB Australia assessment price	
Per 1% CSR 60-71% 0.50% 0.88	USD	Metric ton	60-71%	CPCSA00	0.50%	CPCSP00
Per 1% VM (air dried) 18-27% 0.50% 0.88	USD	Metric ton	18-27%	CPVPA00	0.50%	CPVMP00
Per 1% TM (as received) 8-11% 1.00% 1.77	USD	Metric ton	8-11%	CPTPA00	1.00%	CPTMP00
Per 1% Ash (air dried) 7-10.5% 1.50% 2.65	USD	Metric ton	7-10.5%	CPAPA00	1.50%	CPPAP00
Per 0.1%S (air dried) 0.3-1% 1.00% 1.77	USD	Metric ton	0.3-1%	CPSPA00	1.00%	CPSPV00

Penalties & Premia: Differentials

	Currency	UOM	Within Min-Max		% of US low-vol HCC FOB USEC assessment price	
Per 1% CSR	USD	Metric ton	50-64%	CPPBA00	0.25%	CPPBB00
	USD	Metric ton	40-49%	CPPBC00	0.05%	CPPBD00
Per 0.1% S	USD	Metric ton	0.70-1.05%	CPPBE00	0.75%	CPPBF00
	USD	Metric ton	1.06-1.25%	CPPBG00	0.75%	CPPBH00
Per 1% TM (as received)	USD	Metric ton	6-11%	CPPBK00	1.00%	CPPBL00
Per 1% Ash	USD	Metric ton	5-10%	CPPBI00	1.75%	CPPBJ00

Coking Coal Swaps: Platts Premium Low Vol FOB Australia

	Currency	UOM				
Prompt Month	USD	Metric ton	MCPLM01	-	-	-
Prompt Month + 1	USD	Metric ton	MCPLM02	-	-	-
Prompt Month + 2	USD	Metric ton	MCPLM03	-	-	-
Prompt Quarter +1	USD	Metric ton	MCPLQ01	-	-	-
Prompt Quarter + 2	USD	Metric ton	MCPLQ02	-	-	-
Prompt Quarter +3	USD	Metric ton	MCPLQ03	-	-	-
Prompt Calendar	USD	Metric ton	MCPLY01	-	-	-

METALLURGICAL COAL AND MET COKE ASSESSMENTS PUBLISHED IN COAL TRADER INTERNATIONAL

Metallurgical Coke

	Currency	UOM			
FOB North China 66/65% CSR	USD	Metric ton	MCCNC00	-	-
FOB North China 62% CSR	USD	Metric ton	AAWVL00	-	-
CFR India 62% CSR	USD	Metric ton	MCCEI00	-	-
DDP North China (weekly)	Yuan	Metric ton	AAWJ00	-	-

Daily metallurgical coal, coking coal swaps and met coke assessments

Detailed information is available in the Metallurgical Coal Methodology at: <http://www.platts.com/methodology-specifications/coal>.

Coal Trader Analytics, Coal Trader

Supply and Demand

Coal production numbers are modeled using historical EIA weekly coal production and coal carload data published by the Association of American Railroads. Coal consumption numbers are derived by using a combination of Platts modeled daily ISO coal generation numbers and the historical Fuel Heat Contents obtained from EIA 923.

Both consumption and production numbers are summed by EIA gas storage week.

Coal stockpiles are derived from a combination of historical EIA coal stockpiles at electric utilities and Platts modeled coal production and consumption numbers. When new EIA data becomes available, Platts modeled estimates are replaced.

This can have the effect of shifting estimates from the period of replacement to present for consumption, production, and stockpile figures.

Dark Spreads

Dark spreads are indicative prices giving the average difference between the cost of coal and the equivalent price of electricity on any given day. Dark spreads are based on Platts daily OTC physical assessments for FOB coal for Central Appalachia rail (CSX) 12,500 Btu/lb, Illinois Basin 11,800 Btu/lb and Powder River Basin 8,800 Btu/lb.

Platts produces prompt-month forward dark spreads for the following power hubs and mine basins:

- Cal-ISO SP15, PRB 8,800 Btu/lb;
- ERCOT North, PRB 8,800 Btu/lb;

- Into Southern, PRB 8,800 Btu/lb;
- Into Southern, Illinois Basin 11,800 Btu/lb;
- MISO Indiana, PRB 8,800 Btu/lb;
- MISO Indiana, ILB 11,800 Btu/lb;
- PJM West, CAPP rail (CSX) 12,500 Btu/lb;
- SPP South, PRB 8,800 Btu/lb

The formula uses delivered \$/MWh cost estimates for coal at each power hub and subtracts the delivered cost from the corresponding prompt-month Platts M2MS forward power price. To calculate the delivered costs, Platts first estimates transport and insurance costs by subtracting the average Platts OTC prompt-month coal price from the weighted-average delivered costs of coal in EIA-923 data for the mine basin that makes up the majority of the deliveries for the given power hub. Platts then applies those figures forward to the daily physical OTC coal prices along with a corresponding coal MMBtu/MWh heat rate to arrive at a \$/MWh delivered cost figure.

The formula is as follows:

$\$/\text{MWh prompt-month power price} - \$/\text{MWh delivered coal cost estimate}$

Platts produces on-peak, off-peak, and around-the-clock (ATC) dark spreads for each power hub, where the around the clock dark spread is based on the combination of the hourly weighted off-peak and on-peak prompt-month power price.

The dark spreads do not factor in any emissions related operating costs.

For more questions related to data, methodology, and analytical content please contact coal_analytics@spglobal.com.

US coal vs gas fuel cost ratios, Coal Trader

The Platts US coal-vs-gas fuel cost ratios are used to assess the regional competitiveness between coal and gas generation at the major power trading hubs. The ratio is defined as the \$/MWh fuel cost for coal divided by the \$/MWh fuel cost for gas. Gas generation is more competitive than coal when the ratio is greater than one and vice versa.

All price data is for prompt month coal and gas contracts. Coal transportation and insurance costs are estimated on a monthly basis from EIA-923 data and calculated by subtracting the average Platts OTC prompt-month coal price from the weighted-average delivered costs for the same period for coal coming from the mine basin that makes up the majority of deliveries for a given power hub.

Heat rates are also derived monthly from EIA-923 data and represent the weighted average heat rates for power plants in states that are associated with the respective grid operators. The figures do not take into account any additional costs associated with emissions.

The fuel input prices behind the ratios are estimates of delivered fuel costs for power flowing to the following power trading hubs:

- ERCOT North
- Into Southern
- MISO Indiana
- PJM West
- SPP South

The power hub to state groupings for the weighted average delivered prices and heat rates is as follows:

- **MISO Indiana:** IL, KY, MI, OH, TN
- **PJM West:** MD, PA, WV
- **ERCOT North:** TX
- **SPP South:** KS, NE, OK
- **Into Southern:** AL, FL, GA, SC

The delivered coal prices reflect coal deliveries from the following basins for each power hub:

- **ERCOT North:** PRB
- **Into Southern:** PRB
- **Into Southern:** IL
- **MISO Indiana:** PRB
- **MISO Indiana:** IL
- **PJM West:** CAPP

- **SPP South:** PRB

The power to gas hub groupings are as follows, for power hubs with more than one gas hub Platts uses the average gas price between the two hubs:

- **ERCOT North:** TX Eastern E TX
- **Into Southern:** FL Gas Zn3, Transco Zn4
- **MISO Indiana:** Chicago CG
- **PJM West:** Dominion S Pt, TX Eastern M-3
- **SPP South:** Panhandle TX-OK, Oneok OK

For more questions related to data, methodology, and analytical content please contact coal_analytics@spglobal.com.

Currency conversions

Platts Atlantic and Asia-Pacific thermal coal assessments are originally assessed in USD/mt. The original assessments are then converted into Eur/Mt using the exchange rates as assessed by Platts.

The source of the foreign exchange data is Platts assessment Eur-USD (AACOP00) and the timestamp is 16.30 London time.

PCC 6 (VAT included), PCC 7 (VAT included) and PCC 8 (Duty & VAT included) are automated values derived from PCC 6, PCC 7 and PCC 8 US\$ denominated assessments by converting to Yuan and adding VAT and/or duty at the prevailing rate.

Changes to the prevailing rate of VAT and/or duty will be applied immediately on public notification from the relevant Chinese authorities.

The foreign exchange conversion rate is the prevailing Bank of China mid-point of the Cash Buying and Cash Selling rates at the timestamp for the PCC thermal coal assessment series.

REVISION HISTORY

April 2019: Platts removed reference to FOB Baltimore 13,000 Btu/lb GAR (6,944 kcal/kg NAR), FOB Hampton Roads 12,500 Btu/lb (6,667 kcal/kg NAR) and FOB New Orleans 11,500 Btu/lb GAR (6,111 kcal/kg NAR) assessments, which were discontinued.

April 2019: Platts clarified the emissions intensity factor used in its German clean dark spreads with 45% efficiency.

August 2018: Platts completed an annual update to the Thermal Coal methodology and also revamped sections I-VI.

July 2018: Platts removed references to daily 90-day assessments for CIF ARA and FOB Newcastle following discontinuation on July 23. Platts also added monthly and quarterly averages for the CIF ARA 15-60 and FOB Newcastle 7-45 day assessments.

April 2018: Added US FOB assessments.

December 2017: Platts discontinued the daily CAPP Barge OTC assessment and related assessments on December 26.

October 2017: The Platts US Thermal Coal assessments section was revised to reflect changes in the daily OTC coal assessment methodology, including the publishing of a 2 pm prevailing Eastern time initial market value, which will be tested in the market through 2:30 pm.

August 2017: Platts completed an annual update to the Thermal Coal methodology.

August 2017: Added daily FOB Newcastle 5,500 kcal/kg NAR 23% ash assessment.

June 2017: Renamed OTC Broker Index to Platts Daily Physical Coal Assessments. Discontinued US thermal coal futures assessments.

May 2017: Amended UK and German dark spreads to reflect the change of source for European emissions (EUA) prices.

February 2017: Discontinued the FOB Venezuela 4% Sulfur and FOB USGC 5%-6% sulfur petcoke assessments; changed the names of the remaining US petcoke assessments; added typical specifications for the remaining US petcoke assessments and the ranges that will be normalized to those specifications..

February 2017: Discontinued the South African Richards Bay FOB 6,000 NAR quotes for both 7-45 days and 90 days forward, along with associated forward curve. Addition of South African Richards Bay FOB 6,000 NAR netback quote.

January 2017: Added daily NEAT Coal Index methodology; added methodology for US coal vs gas fuel cost ratios; removed reference to discontinued spark spreads in Coal Trader; removed reference to the discontinued daily Illinois Basin 11,500 OTC assessment; removed reference to discontinued forward assessments for Platts US daily OTC coal assessments and Weekly Price Survey assessments. Discontinued the weekly CIF Japan 6,080 kcal/kg NAR, CIF Korea West 6,080 kcal/kg NAR, FOB Gladstone 6,500 kcal/kg GAR, FOB Qinhuaogdao 6,200 kcal/kg GAR and FOB Poland Baltic 6,000 NAR kcal/kg 90-day assessments. Updated the formula for the FOB Vancouver daily netback price.

December 2016: Discontinued CFR South China and FOB Qinhuaogdao 5,500 kcal/kg NAR prices, FOB ARA Barge 6,000 NAR 90-day assessments, the CIF ARA Carbon-Adjusted price and Biomass Wood Pellet assessments.

October 2016: Added clarification regarding the collection of data for inclusion in US OTC thermal coal assessments and the treatment of bilateral, non-brokered trades. Changed US thermal coal netback sulfur value to \$/mt from \$/st. Changed the sulfur content for Thacker/Kenova to 1.6 lbs SO₂/MMBtu from 1.5 lbs SO₂/MMBtu.

October 2016: Review of Parts I-VI

October 2016: Added language related to new US thermal coal netbacks.

September 2016: Changed the source of the Eur-USD exchange rate from Tullet Prebon to Platts assessment.

September 2016: Added China PLV, met coke price differentials and PCC Met Shanxi Premium Low Vol CFR China equivalent price.

September 2016: Platts completed an annual update to the Thermal Coal methodology. In this update, Platts reviewed all content and introduced regional sections, code lists and specification guides.

September 2016: Added language related to new US thermal coal futures assessments; new weekly Illinois Basin and Colorado physical prices; and US thermal coal netback methodology.

June 2016: Coal Trader Analytics (Coal Trader) methodology was added.

May 2016: References to the discontinued OTC Hedge Price Monitor were removed.

April 2016: Deleted reference to the discontinued US FOB assessments; clarified content of the US OTC Broker Index.

February 2016: Added clarification regarding chlorine as well as typical heat and sulfur content to specifications for Illinois Basin 11,800 daily assessment.

January 2016: Added specifications for Illinois Basin 11,800 daily assessment.

July 2015: Updated the specifications for PCC assessment suite.

July 2015: Updated specifications for FOB Kalimantan 5,900 GAR and FOB Kalimantan 5,000 GAR.

June 2015: Methodology for CCI 7 VAT included and CCI 8 Duty & VAT included price assessments added. Revised US OTC specifications to add chlorine quantity to Illinois Basin 11,500 OTC product. The assessments in the OTC Broker Index were renamed: NYMEX look-alike – 12,000 Btu/lb. -1% was renamed CAPP barge (12,000 Btu/lb) OTC; CSX BS/K – 12,500 Btu/lb. -1% was renamed CAPP rail (CSX) (12,500 Btu/lb) OTC; PRB – 8,800 Btu/lb. was renamed PRB 8,800 Btu/lb OTC; PRB – 8,400 Btu/lb. was renamed PRB 8,400 Btu/lb OTC; and Illinois Basin 11,500 OTC was renamed Illinois Basin 11,500 Btu/lb OTC. In addition, the CAPP 1% vs Compliance Spread listed in the OTC Broker Index was discontinued.

March 2015: Added CIF Turkey and CFR India East and West petcoke methodology.

March 2015: Amended and expanded US petcoke methodology.

February 2015: This methodology guide was updated to include further description of Platts' processes and practices in survey assessment environments.

January 2015: Platts revamped all Power Methodology And Specifications Guides, including its Coal guide, in December 2014. This revamp was completed to enhance the clarity and usefulness of all guides, and to introduce greater consistency of layout and structure across all published methodology guides. Methodologies for market coverage were not changed through this revamp, unless specifically noted in the methodology guide itself.

August 2014: CFR India East 6,000 NAR and CFR India West 6,000 NAR assessments were renamed from CFR India East 6,300 GAR and CFR India West 6,300 GAR.

August 2014: Platts discontinued its monthly Coking Coal 90-day forward price assessments.

April 2014: The carbon efficiency factor used in German and UK clean dark spreads was revised from 0.96 and UK CPS clean dark spreads were published.

March 2014: Added weekly CFR Turkey thermal coal assessment methodology.

November 2013: 6,450 GAR FOB Bolivar assessment was discontinued.

September 2013: Platts amended the FOB Bolivar, 6,300 GAR specifications to reflect thermal coal of 6,000 NAR FOB Colombia.

June 2013: Added daily FOB Richards Bay 5,500 NAR methodology.

December 2010: The Platts Daily OTC coal assessments were renamed but the underlying specifications and methodology were not changed, and remain the same as the Coal Trading Association specifications. CAPP barge OTC was previously named NYMEX 12,000/<1%; CAPP rail (CSX) OTC was CSX 12,500/1%; PRB 8,800 OTC was PRB 8,800/0.35%; and PRB 8,400 OTC was PRB 8,400/0.35%.

May 2007: Added CIF ARA, FOB Richards Bay and FOB Newcastle forward curve assessments methodology.

August 2006: Monthly and quarterly averages were calculated using the day of assessment, rather than the date of publication, as the reference date.