



# LNG

## Assessment methodology

Updated Apr 1, 2026

To reflect a recent change in market environments, we will make the following amendments.

1. In the section of DES Northeast Asia, premiums/discounts against DES Northeast Asia spot quotations (NEA Quotes) are implemented. In the section of Natural Gas Futures, NEA Quotes are added. This reflects a recent pickup in floating-based trades linked to DES Northeast Asia spot quotations.
2. In the sections of FOB Atlantic and DES South America, premiums/discounts against Dutch Title Transfer Facility (TTF) natural gas quotations are implemented. In the section of DES Europe, premiums/discounts against British National Balancing Point (NBP) natural gas quotations are deleted. This reflects that the TTF is used more often as the benchmark in floating-based traders while the NBP is losing its presence.
3. Freight will be assessed individually in the East and the West. This reflects that the Canal of Suez is typically considered as a division point in the spot freight market and freight rates are assessed separately between the East and the West. DFDE and TFDE are integrated into one assessment category. Similarly, MEGI and X-DF are categorized as one single assessment. MEGI and X-DF are renamed as "2 Stroke Tankers" including MEGA type. This reflects that assessments for each tanker (engine type) are more often divided into Steam Turbine, Diesel and 2 Stroke. Conventional Tankers are renamed as "Steam Tankers" as TFDE and MEGI are gradually perceived as conventional.
4. Redefine cargoes to be assessed in each market. Modify explanations in the methodology where necessary.

## **Relevance of Rim Assessment methodology**

The purpose of all price assessments in reports issued by Rim Intelligence is to provide an indication to energy market players as to the levels at which transactions can take place so that trades can be done with high transparency and at reasonable prices. To achieve this purpose, we have set up “General Procedures for Price Assessment” as follows, and “Price Assessment methodology” for each report. Detailed in the “General Procedures for Price Assessment” and “Price Assessment methodology” for each report are processes and standards that we deem are necessary to achieve the above purpose. By following these processes and standards in making price assessments, we consider our Assessment methodology to be appropriate.

## **Chapter 1: General Procedures for Price Assessment**

### **Article 1: Purpose of price assessment**

The purpose of all price assessments in our reports is to provide an indication to energy market players as to the levels at which transactions can take place so that trades can be done with high transparency and at reasonable prices.

### **Article 2: Conducting price assessment**

To achieve the purpose outlined in Article 1, we have set up the following guidelines in our “General Procedures for Price Assessment”, and “Price Assessment methodology” for each report. We follow these guidelines in making price assessments.

- Trades considered for price assessment
- Assessment window
- Priority in price assessment
- Selection of players providing market information
- Method of information gathering
- Establishment and role of supervisors
- Selection of supervisors
- Maintaining quality of review by supervisors
- Maintaining consistency in price assessment
- Reliability and adequacy of market information
- Making Assessment methodology available
- Regular reviews of Assessment methodology
- Amendments to Assessment methodology
- Changes/Amendments to price assessment
- Quantity
- Reasons for using specific units for quantity (barrel etc.)

### **Article 3: Trades considered for price assessment**

For each price index, our price assessment is based on quantities, delivery period and areas with the most liquidity. Further, details such as the value and quantity on which the assessment is based, market information which is used as a reference, and other platforms such as the Rim Trading Board and specific markets including trades carried out in Exchanges are included in the methodology of each report.

### **Article 4: Assessment window**

For each price index, the Time Window considered appropriate for our price assessment is that which is deemed to be the most convenient and effective during trading hours in Asia, including Japan.

### **Article 5: Priority in price assessment**

For each price index, among traded prices in transactions that take place between agreed parties or in other markets, bids and offers, the priority as to which price is considered first for assessment is determined and details are given in the methodology of each report.

#### **Article 6: Selection of players providing market information**

When selecting players to obtain information from, we take into account the quantity handled and the amount of influence on the market, without any bias towards buyers or sellers. We gather market information from many players including Majors, oil and gas producers, oil companies, traders, dealers and end-users. Each report team determines that there is no bias in the players it obtains information from in terms of area and the type of information they have. Should the player be deemed biased, the reporter and team leader may, after obtaining approval from the president, remove him from the list of players providing market information.

#### **Article 7: Method of information gathering**

Our reporters possess suitable quality and skill from a fair and neutral standpoint. Reporters carry out information gathering mainly by telephone but also by email and chat. To ensure the credibility of the player from whom information is gathered, the reporter will call the player's company directly to confirm that the player is indeed working for that company.

#### **Article 8: Establishment and role of supervisor**

Two or more supervisors are assigned to each report. Before each report is issued, at least one of the supervisors checks if the price assessment and its basis are in line with the Assessment methodology and to ensure that consistency is maintained.

#### **Article 9: Selection of supervisors**

The supervisor has knowledge and experience in the product and market for which price assessment is conducted. The selection of supervisors requires approval from the board of directors. The supervisor is not involved in price assessment and writing of commentary for the report of which he is in charge.

#### **Article 10: Maintaining quality of review by supervisors**

For reports for which the supervisor is not the president, the president conducts regular spot checks to maintain the quality of the supervisor's review. After a spot check, a proof of the spot check will be kept.

#### **Article 11: Maintaining consistency in price assessment**

Besides reviews by supervisors, assessment simulation is conducted regularly to maintain consistency among reporters in price assessment.

#### **Article 12: Reliability and adequacy of market information**

Each reporter performing price assessment determines whether a trade was done by the parties involved and whether the information was suspicious or unusual by checking with the relevant parties and other multiple parties, with further investigation carried out if necessary. If unusual market information regarding a trade by parties involved or suspicious information is found, additional information gathering will be carried out before making a judgment as to whether or not to remove the information for consideration for price assessment. Major issues are to be reported promptly to the supervisor and the president. Of these, important professional judgments will be recorded in each report team's information gathering memo, assessment process sheet etc. If it is necessary to check whether the information provided is suspicious, we may consider obtaining information from the back office.

For certain markets with low liquidity, market information for price assessment may be obtained from a single source. Even in such a situation, we follow processes detailed in our Assessment methodology to determine if such market information can be used for price assessment. We do not disregard the information in making price assessment merely because it is obtained from a single source.

Players giving market information are expected to provide all relevant information that meets the conditions for price assessment stated in our Assessment methodology, which is published on our website.

**Article 13: Making our Assessment methodology available**

The Assessment methodology approved by two or more members of the board of directors is published on our website, whereby external market players involved in trading, players providing market information and our subscribers can access.

**Article 14: Regular reviews of Assessment methodology**

Our Assessment methodology is reviewed at least once a year (during the board of directors' meeting held in October) or when substantial changes have taken place in the market. After each review, we may consider making amendments to our Assessment methodology if deemed necessary. When reviewing our Assessment methodology, we may consider views obtained from external market players and our subscribers.

**Article 15: Amendments to Assessment methodology**

If amendments to our Assessment methodology that affect the price assessment process are deemed necessary, discussions are conducted within each report team and amendments are submitted to two or more members of the board of directors for approval. After the amendments are approved by two or more members of the board of directors, a notice of the amendments and the effective date will be placed in our reports in principle one month before, but at least two weeks prior to the effective date.

After the amendments are approved by two or more members of the board of directors, the Assessment methodology with the amendments reflected has to be approved by two or more members of the board of directors by the effective date.

When making amendments to our Assessment methodology that affect the price assessment process, we accept inquiries regarding such amendments from external market players and our subscribers. These inquiries are, in principle, published in our reports or on our website, but if the party making the inquiries requests us not to do so, we may not disclose the details for confidentiality reasons.

For amendments to our Assessment methodology that do not affect the price assessment process, after approval by two or more members of the board of directors, the amendments will be announced in our reports and effected promptly.

**Article 16: Changes/Amendments to price assessment**

Price assessments in our reports will not be amended after they are published, except for typing and spelling mistakes.

## **Chapter 2: Price assessment methodology for LNG Report**

### **1. Spot LNG price assessment**

#### **Purpose of price assessment:**

The purpose of price assessment is to reflect the actual market in which standard spot buying and selling take place on the day of publication.

#### **Definition of price:**

Even if no transactions take place, the value of a commodity may change. The price reflects the changing values of a commodity. The value of a commodity may change depending on supply/demand, production costs, the situation in other markets, and players' perspectives.

#### **Assessment method:**

Price assessment basically takes into account information on deals done, bids/offers and supply/demand situation obtained on the day of publication. Top priority is given to the latest deals done and bid/offer levels within the assessment window. In the absence of deals, bids and offers, buying and selling indications are used as a reference.

Values of commodities are determined by competition among sellers and buyers. Higher bids to be closer to market values than lower bids, and lower offers are considered to be closer to market values than higher offers.

Standard conditions such as cargo volume, loading or delivery period, quality and payment period are taken into account in price assessment.

Price assessments are all based on market information gathered by reporters on each publication day.

#### **Time window**

If a month is divided into two half-months, first half (H1) is first 15 days of the month and second half (H2) is all days after the 15th of the month.

#### **Price unit**

All price units for LNG are in US dollar per million British thermal unit (\$/mmBtu). The LNG industry typically trades LNG by using the \$/mmBtu unit, and Rim follows this convention.

#### **Standard size**

All prices are for LNG cargoes of 60,000-80,000mt to be loaded on conventional tankers (135,000-175,000 cubic meters). Values for contracts for smaller or larger volumes may also be considered.

#### **Standard quality**

LNG cargoes with calorific value of 1,030-1,130Btu/cubic feet are considered to be standard. Values for contracts with non-standard calorific value may also be considered.

#### **Assessment window**

Rim's assessment window for LNG closes at 17:00 hours Tokyo time on the day of publication.

#### **(1) DES Japan (DJ)**

##### **(Type of trade form)**

Price assessments are conducted on Delivery Ex Ship or DES basis.

**(Countries or areas)**

Concluded deals and bids/offers in the DES Japan physical market are considered. Concluded deals and bids/offers in other markets such as the DES Northeast Asia market.

**(Assessment method)**

Prices are assessed on a fixed price basis. Assessments are shown in a single price without any ranges.

- In the absence of actual trades, the DES Japan daily price is assessed based on the mean of the highest bid and the lowest offer placed in the DES Japan physical cargo as of the closing time for that day. In the event the spread between the highest bid and the lowest offer is too far apart and the mean is found irrelevant, the mean will not be applied and the DES Japan daily price will be assessed within the highest bid and the lowest offer. In such case, trades and bids/offers in the DES Northeast Asia will be referred.

- In the event there are no actual trades concluded in the DES Japan physical cargo and no bids and offers in the DES Japan physical cargo during the assessment window, the DES Japan price will take into consideration actual trades, bids and offers in other markets such as the DES Northeast.

- In the event that the lowest offer falls below the highest bid during the price assessment window in the DES Japan physical market, the DES Japan daily price will be assessed based on these lowest and highest values if they are deemed reasonable after a close examination of the market conditions at that time.

- In the event that bids higher than and/or offers lower than values of actual trades that took place in the DES Japan physical market appear just prior to the close of the assessment window for that day, the assessment will be made based on those higher bids and lower offers as well as the actual trades, if those higher bids and higher offers are deemed reasonable following a close examination of market trends and market conditions.

**(Time Window)**

The DES Japan delivery period is divided into twelve one-month periods. With regard to the period for physical cargoes in DES Japan, refer to section (Time Window) of “2. Northeast Asia (DES)” of “Assessment other than DES Japan”.

**(2) Northeast Asia (DES)****① Northeast Asia (NEA)****(Type of trade form)**

Delivery Ex-Ship (DES)

**(Countries or areas)**

Japan, South Korea, Taiwan and China. Destinations in Southeast Asia including Thailand and Vietnam are also considered.

**(Assessment method)**

Prices are assessed on a fixed price basis as well as a floating basis linked to DES Northeast Asia spot quotes (NEA Quotes). The correlation between fixed prices and NEA Quotes are as follows.

Fixed price = NEA Quotes +premiums/discounts

For NEA Quotes, price assessments basically take into account the closing price of the previous day of the publication day on the InterContinental Exchange (ICE).

**(Time Window)**

If publication is in the first half of the month, assessment is for the second half of the next month and the first half and second half of the month after next.

If publication is in the second half of the month, assessment is for the first half and second half of the month after the next month and first half of the month that is 3 months ahead.

**② RIM Northeast Asia Index (RIM Index)**

Rim Index is a daily average price of the three delivery periods of NEA.

**③ RIM Index Monthly Cumulative Average (RIM Index Monthly Cumulative Avg)**

Rim Northeast Asia Index is a monthly cumulative average price of the above three delivery periods on a daily basis. For instance, as of the 20th of the month, Rim announces the cumulative average of three delivery windows from the 1st to the 20th.

**④ Northeast Asia Forward (NEA Forward)**

**(Type of trade form)**

Delivery Ex-Ship (DES)

**(Countries or areas)**

Japan, South Korea, Taiwan and China

**(Time Window)**

The Rim Northeast Asia Forward assessment is a daily assessment of prices three to nine months ahead of the month of the issue day of the report. Monthly spreads are derived from forward curves of the Japan Crude Cocktail (JCC), UK ICE Brent crude market, forward curve indicated by Dutch ICE Title Transfer Facility (TTF) natural gas futures market as well as supply and demand conditions.

**⑤ Northeast Asia Seasonal Index (NEA Seasonal Index)**

Rim estimates the average price for each season (Spring, Summer, Autumn, Winter) based on the Northeast Asia Forward assessments for six months. Rim announces the average assessment of the prices of cargoes delivered in each season.

<u>Season time frame.</u>	<u>Appearance in report</u>
Spring (Apr - Jun)	Sep 16- Mar 15
Summer (Jul - Sep)	Dec 16- Jun 15
Autumn (Oct – Dec)	Mar 16- Sep 15
Winter (Jan – Mar)	Jun 16- Dec 15

**(3) Others**

**① Middle East (FOB)**

**(Type of trade form)**

Free on Board (FOB)

**(Countries or areas)**

Qatar, Oman, UAE, Yemen and Egypt. Loading points in other countries in the Middle East are also considered.

**(Assessment method)**

Prices are assessed on a fixed price basis.

**(Time Window)**

If publication is in the first half of the month, assessment is for the first half and second half of the next month and the first half of the month after next.

If publication is in the second half of the month, assessment is for the second half of the next month and the first half and second half of the month after next.

**② Middle East (DES)**

**(Type of trade form)**

Delivery Ex-Ship (DES)

**(Countries or areas)**

Kuwait, UAE, Jordan, Bahrain, Iraq and Egypt. Destinations in other countries in the Middle East are also considered.

**(Assessment method)**

Prices are assessed on a fixed price basis.

**(Time Window)**

If publication is in the first half of the month, assessment is for the first half and second half of the next month and the first half of the month after next.

If publication is in the second half of the month, assessment is for the second half of the next month and the first half and second half of the month after next.

**③ South Asia (DES)**

**(Type of trade form)**

Delivery Ex-Ship (DES)

**(Countries or areas)**

India, Pakistan, Bangladesh and Sri Lanka.

**(Assessment method)**

Prices are assessed on a fixed price basis.

**(Time Window)**

If publication is in the first half of the month, assessment is for the first half and second half of the next month and the first half of the month after next.

If publication is in the second half of the month, assessment is for the second half of the next month and the first half and second half of the month after next.

**④ Atlantic (FOB):**

**(Type of trade form)**

Free on Board (FOB)

**(Countries or areas)**

Countries and areas along the Atlantic Ocean including the US, Equatorial Guinea, Trinidad & Tobago, Nigeria, and Angola. Cargoes from Norway, Russia (except Northeast Asia bound) and Algeria as well as re-exported cargoes from Europe are also considered.

**(Assessment method)**

Prices are assessed on a fixed price basis as well as a floating basis linked to the TTF market. The correlation between fixed prices and the TTF market are as follows.

Fixed price = TTF + premiums/discounts

For the TTF market, price assessments basically take into account the closing price of the previous day of the publication day on the InterContinental Exchange (ICE).

**(Time Window)**

If publication is in the first half of the month, assessment is for second half of the current month and the first half and second half of the next month.

If publication is in the second half of the month, assessment is for the first half and second half of the next month and the first half of the month after next.

**⑤ Europe (DES)**

**(Type of trade form)**

Delivery Ex-Ship (DES)

**(Countries or areas)**

The UK, France, Belgium, Netherland, Germany, Spain and Portugal. Destinations in other countries in Europe including the Mediterranean and North Europe are also considered.

**(Assessment method)**

Prices are assessed on a fixed price basis as well as a floating basis linked to the TTF market. The correlation between fixed prices and the TTF market are as follows.

Fixed price = TTF + premiums/discounts

For the TTF market, price assessments basically take into account the closing price of the previous day of the publication day on the InterContinental Exchange (ICE).

**(Time Window)**

If publication is in the first half of the month, assessment is for second half of the current month and the first half and second half of the next month.

If publication is in the second half of the month, assessment is for the first half and second half of the next month and the first half of the month after next.

**⑥ South America (DES)**

**(Type of trade form)**

Delivery Ex-Ship (DES)

**(Countries or areas)**

Brazil, Argentina, Colombia and Chile. Destinations in other countries in South America as well as Mexico and Dominican Republic in Central America are also considered.

**(Assessment method)**

Prices are assessed on a fixed price basis as well as a floating basis linked to the TTF market. The correlation between fixed prices and the TTF market are as follows.

Fixed price = TTF + premiums/discounts

For the TTF market, price assessments basically take into account the closing price of the previous day of the publication day on the InterContinental Exchange (ICE).

**(Time Window)**

If publication is in the first half of the month, assessment is for second half of the current

month and the first half and second half of the next month.  
If publication is in the second half of the month, assessment is for the first half and second half of the next month and the first half of the month after next.

## 2. Freight rates assessment

### **Purpose of price assessment:**

The purpose of price assessment is to reflect the actual freight market in which standard spot chartering takes place on the day of publication.

### **Definition of price:**

Even if no transactions take place, the value of a commodity may change. The price reflects the changing values of a commodity. The value of a commodity may change depending on supply/demand, production costs, the situation in other markets, and players' perspectives.

### **Assessment method**

Price assessment basically takes into account information on deals done, bids/offers and supply/demand situation obtained on the day of publication. Top priority is given to the latest deals done and bid/offer levels within the assessment window. In the absence of deals, bids and offers, leasing and chartering indications are used as a reference.

Chartering rates are determined by competition among owners and charterers. Higher bids are considered to be closer to market values than lower bids, and lower offers are considered to be closer to market values than higher offers.

Standard conditions such as chartering timings and periods are taken into account in price assessment.

Price assessments are all based on market information gathered by reporters on each publication day.

### **Type of tankers**

LNG tankers; carrying capacity of 135,000 to 175,000cbm with the following engine types. But other LNG tanker types may also be considered.

- (a) Steam (Steam Turbine Propulsion Engine)
- (b) DFDE (Dual Fuel Diesel Engine)
- (c) TFDE (Triple Fuel Diesel Engine)
- (d) MEGI (Electronically Controlled Gas Injection Dual Fuel Diesel Engine for Marine Use)
- (e) MEGA (Low-pressure Otto cycle dual-fuel diesel engine)
- (f) X-DF (Lean Premixed Dual Fuel Diesel Engine)

### **Time window**

Short-term charters of less than three months

### **Assessment window**

Rim's assessment window for charter rates closes at 17:00 hours Tokyo time on the day of publication.

### **Basis of assessment**

#### **(1) Route**

#### **(Type of trade form)**

Short-term charters of less than three months are assessed for each of the following routes.

- (a) Middle East-Northeast Asia
- (b) Atlantic-Northeast Asia
- (c) Atlantic-Europe
- (d) Middle East-Europe

#### **(Price unit)**

All price units for charter rates are in US dollar per million British thermal unit (\$/mmBtu).

**(Condition of assessment)**

Rim assesses spot charter rates based on the following conditions:

**① Number of days in a voyage and area for voyage**

Market for one voyage from loading point to discharging point. Number of days per voyage as follows:

- 30 days for a Middle East-Northeast Asia route
- 60 days for an Atlantic-Northeast Asia route
- 15 days for an Atlantic-Europe route
- 22 days for a Middle East-Europe route

Rim sets the loading as well as discharge ports as follows:

- Middle East = UAE, Qatar, Oman, Yemen and Egypt
- Northeast Asia = Japan, South Korea, Taiwan, and China
- Atlantic = US, Equatorial Guinea, Trinidad and Tobago, Nigeria and Angola
- Europe = UK, France, Belgium, Netherland, Germany, Spain and Portugal

**② Charter rates-short-term charter rates assessed for each tanker type shown in the (2) section (engine types)****③ Bunker market for fuel of tankers-assessments of VLSFO at Tokyo Bay, Singapore and Rotterdam on the Rim Daily Bunker Oil report of the day is shown.****④ Boil off****⑤ Port charge at the loading and discharge ports is included in the assessment of Middle East-Northeast Asia route. Port charge is included in the assessments for other routes than Middle East-Northeast Asia route only when the information is available.****⑥ A Suez Canal charge is included only when the information is available.****(2) Engine types****(Type of trade form)**

Short-term charter rates of less than three months are assessed by converting into daily rates. Tanker types are divided into the following three types.

- ① Steam
- ② DFDE/TFDE
- ③ 2 Stroke (MEGI, MEGA, X-DF)

**(Areas)**

With the Canal of Suez set as a division point, charter rates are assessed separately for the East of Suez and the West of Suez.

**(Price unit)**

All price units for charter rates are in US dollar.

### **3. Reference prices**

#### **(1) JCC (Japan Crude Cocktail)**

##### **(Forecast price for JCC)**

The forecast price includes insurance and freight for delivery to Japan.

##### **(Forecast method)**

--- Rim forecasts the JCC price using Dubai crude as a base. Rim forecasts the price based on the following conditions.

- Dubai crude oil price
- Price difference with Dubai crude oil
- Freight
- Insurance

Rim determines JCC forecast price based on the above conditions.

##### **(Price unit)**

All price units for JCC are in US dollar per barrel, which is commonly used in the crude oil market. US dollar per mmBtu is also used.

#### **(2) Natural Gas Futures Settlement Prices**

Natural Gas futures quotes are published based on the closing prices in the New York Mercantile Exchange (NYMEX) and InterContinental Exchange (ICE) on the previous day of the publication day. Price unit is converted into US dollar per mmBtu. The following items are published.

- ① NYMEX HH (Henry Hub)-US Natural Gas quotes
- ② ICE NBP (National Balancing Point)-British Natural Gas quotes
- ③ ICE TTF (Title Transfer Facility)-Dutch Natural Gas quotes

DES Northeast Asia spot quotes are also published as ④ "ICE NEA Quotes" based on the closing prices in ICE on the previous day of the publication day. Price unit is US dollar per mmBtu.

#### **(3) Crude Oil Prices, Others**

Prices of crude oil and petroleum products, power prices as well as price data from LNG import statistics in major countries and so on are also published.