



ResourceWise (formerly Prima Markets) price assessments provide a transparent and reliable fair value benchmark for commodities in the spheres of energy, agricultural, and biofuel markets.

To facilitate accurate, reliable and timely price discovery, ResourceWise establishes named benchmark assessments for specific commodity grades at specific trade hubs. The parameters of each named assessment including specification, dates, location, volume and currency, are determined by ResourceWise staff experienced in benchmarking and indexation in partnership with industry participants. ResourceWise's assessments are designed as much as possible to accurately reflect the organic nature of price formation across the relevant pool of trade participants in each named market. Assessments are subject to initial and ongoing review and approval by ResourceWise's editorial team and management, taking into account the views of relevant stakeholders.

All assessments are undertaken by trained (see ResourceWise Management System, Hiring and Training Appendix 5) market analysts in strict accordance with ResourceWise's overarching published methodology. Individual assessments conform strictly to the specific parameters on location, quality and timing laid out for each price point.

ResourceWise analysts daily gauge market conditions and shifts in the market spreads which drive direction in individual commodity markets. With this information, ResourceWise pricing analysts will engage with market participants to establish the range and depth of trades, bids, and offers seen in the market. Communications are made by email, instant messenger, telephone, and in face-to-face conversations.



### Submitter code

Any CP or intermediary broker identified to a ResourceWise analyst as being in possession of market relevant data may submit inputs to ResourceWise. ResourceWise continuously reviews the array of participants in each named assessment market with existing CP and intermediary broker contributors to ensure it is canvassing input from the broadest possible number of contributors. ResourceWise centrally maintains lists of authorized contributors for each named assessment. ResourceWise analysts will contact new CPs or intermediary brokers and outline ResourceWise's assessment activity. Inputs are recorded and cross-checked against other CP and intermediary broker sources to check their veracity, and ResourceWise assessors are expected to make reasonable efforts to check the identity of inputters to ensure the integrity of their contributions. ResourceWise flags its guidelines for submitter conduct in its daily reports sent to contributors and within IOSCO scope.

All records will be kept for five years.

## Hierarchy of inputs

ResourceWise considers price contributions towards its IOSCO-scope assessments according to a strict hierarchy.

In order of priority, named trades, then firm named bids, or offers, satisfying the specifications of ResourceWise's price assessment, will be included in the formation of individual pricing benchmarks.

Reported deals done, confirmed by approved named counterparties (CPs) or an intermediary broker, will be given priority towards the assessment. This is provided the deals fall within the daily assessment time, trade date, and specification parameters of ResourceWise's published assessment methodology, and are considered arm's length, legitimate and repeatable.

Absent any confirmed trades, ResourceWise analysts will look to confirmations of firm bid/offer indications in its pricing hierarchy by approved named CPs, or intermediary



brokers. This is provided the bids and offers fall within the daily assessment time, trade date, and specification parameters of ResourceWise's published assessment methodology, and are considered arm's length, legitimate, executable and repeatable.

Absent any fresh firm market indications, ResourceWise analysts will look to indicative buy and sell levels from approved named CPs, or intermediary brokers, in order to gauge fair value. This is provided the indications are for product falling within the daily assessment time, trade date, and specification parameters, of ResourceWise's published assessment methodology, and are considered arm's length, legitimate, executable and repeatable.

Absent any fresh indications in the market, ResourceWise analysts will, if necessary, gauge fair value against the context of any movement in the wider market backdrop shaping fair value at the point of liquidity being assessed. Decisions to move published ResourceWise assessments based on market contextual information will be fully documented with supporting data inputs, rationale and calculations if appropriate. Any formulas used to determine market value relative to shifts in more liquid markets will be reviewed every six months.

ResourceWise endeavors to ensure that inputs forward towards its assessments are genuine arms-length trades or invitations to treat by a process of confirming or cross-verifying inputs with CPs and/or intermediary brokers. ResourceWise will solicit CPs to confirm transaction data via confirmations of deals or other inputs, where possible through back-office submissions. ResourceWise will meanwhile canvas independent third-party intermediary brokers to confirm transaction data.

All contributions of information used towards ResourceWise's assessment will be fully archived according to

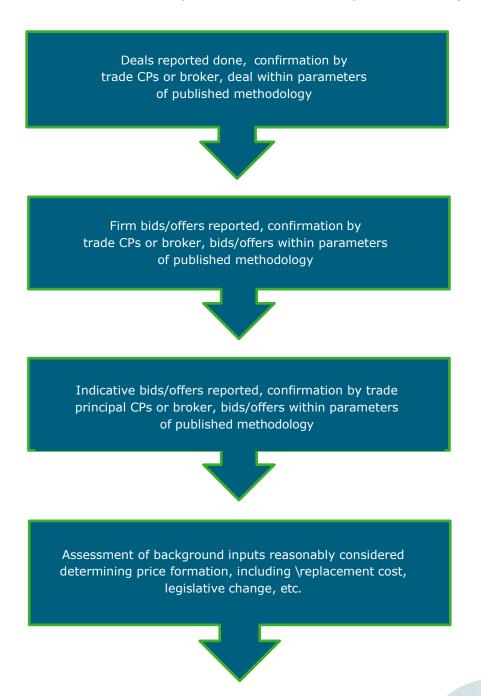
the name of the contributor, and the time and date of the contribution.

Given the lack of consistent liquidity prevalent in many niche markets falling under ResourceWise's core biofuels, agricultural and energy umbrella, ResourceWise does not set any overarching minimum data thresholds for its named assessments.



The ResourceWise hierarchy of assessment inputs is illustrated by the diagram below:

## ResourceWise price assessment input hierarchy





## Daily matrix of contributor contacts

For assessments inside current IOSCO scope, ResourceWise maintains a detailed daily record of the contacts made to external CPs, or received from external CPs or intermediary brokers, to illustrate the counterparty depth of the market being assessed, and the size of the daily contribution array relative to the overall size of the individual market. As part of their responsibilities, ResourceWise assessors are expected to extend contact to the largest array of CPs and intermediary brokers deemed to be in the scope of the market being assessed, provided these CPs and intermediary brokers meet ResourceWise's corporate responsibility and market behavioral standards for inclusion towards assessment input as set out in ResourceWise's Submitter Code of Conduct.

Each day attempted contacts are noted, and the modes of communication used for successful contributions are color coded to allow communication records to be retrieved with ease. ResourceWise assessors summarize the information received from individual contributors in the same daily matrix of contribution inputs to ease post-assessment price formation audits. The name of the individual ResourceWise assessor is recorded in the same matrix.



Below is a simplified tabular overview of ResourceWise's daily record-keeping matrix, recording its communications with price contributors:

# ResourceWise matrix of daily assessment inputs

	13 March	14 March	15 March	16 March
Firm 1 (Trader)	Reported deal (P)	On holiday	Contacted N/A (P)	Contacted N/A (P, Y, E)
Firm 2 (Trader)	Reported deal (Y)		Contacted N/A (P)	
Firm 3 (Trader)		Reported bid (P)		Reported deal (P)
Firm 4 (Trader)	Contacted N/A (P)	Reported offer (E)		Contacted N/A (P, Y, E)
Firm 5 (Trader)	Contacted N/A (Y)		Reported deal (Y)	Reported deal (FF)
Firm 6 (Trader)		Contacted N/A (Y)	Reported deal (P)	
Firm 7 (Trader)		Contacted N/A (Y)		
Firm 8 (Trader)	Contacted N/A (P, Y)			Reported bid (Y)
Firm 9 (Broker)	Confirmed deal (P)	Confirmed bid (P)	Confirmed deal (P)	Confirmed bid (Y)
Firm 10 (Broker)		Confirmed offer (Y)		Confirmed deal (FF)
Assessor Key	AB Y = Yahoo Inst Face to Face	BC ant Messenger,	BC P = Telephone, E	AB = Email, FF =



To reduce the risk of key submitter dependency, ResourceWise assessors will endeavor each day to gauge the depth of the market across a varied and representative spread of participants.

Assessors are expected to expand their array of approved contributors to the fullest extent consistent with the operation of the market. Contributions to assessments made by only one counterparty will still be fully weighted according to ResourceWise's hierarchy of inputs. Inputs will be presented to other CPs or intermediary brokers for corroboration or comment.

Benchmark assessments are accompanied by a full written rationale describing the logic determining the formation of each day's price determination and subjected to recorded ResourceWise peer review before publication. Assessment inputs are fully documented, recorded, and subjected to frequent scrutiny to ensure that they accurately reflect the breadth of participation in the market.

## Anomalies and exceptions log

Any anomalous inputs deemed exceptional, and therefore discounted from inclusion towards a daily IOSCO-scope assessment, are individually recorded in an exceptions log.

ResourceWise assessors run through a checklist of controls to identify data which may be excluded. These checks include:

- 1) Does the data meet the full specifications of ResourceWise's methodology on timing, specification, and location?
- 2) Can the data be verified by other CPs or intermediary brokers?
- 3) Has the data been submitted by an approved contributor?
- 4) Does the data fall within a reasonable threshold relative to the other contributions in the input hierarchy deemed fit for inclusion?

ResourceWise assessors will look to other CPs or intermediary brokers for corroboration or comment upon perceived anomalies. ResourceWise editors may monitor assessors' communications with CPs and intermediary brokers to watch for inappropriate patterns of contributor behavior.



Inputs failing these combined tests will be recorded in the exceptions log. Consistent patterns of anomalous data contribution may be escalated to ResourceWise management for further review to determine action.

ResourceWise reserves the right to exclude contributors from its daily assessment process while it internally reviews the scope of the anomalous input data reporting. Following internal review, any decision to exclude a contributor from submitting inputs to a ResourceWise assessment or assessments for infringing ResourceWise's Submitter Code of Conduct may be escalated to ResourceWise Board level for a final ruling. CPs or intermediary brokers excluded from a ResourceWise assessment, or assessments, have the right of written appeal to the ResourceWise Board over the decision.

#### Peer review

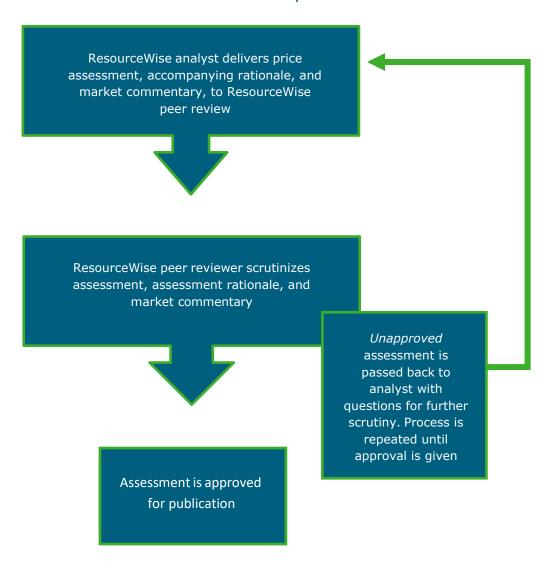
All IOSCO-scope assessments are peer reviewed to ensure consistency in the application of the appropriate ResourceWise methodology. An assessment cleared by peer review attests that the assessment has been made in accordance with ResourceWise's price assessment input hierarchy (above) and met the guidelines controlling exercise of judgement by assessors (below).

ResourceWise assessors will deliver their proposed assessment level for peer review, accompanied by a written breakdown of the formation of the assessment in accordance with the hierarchy of inputs, and accompanied by a fuller written commentary on the day's market activity. The workflow between assessor and peer reviewer is recorded electronically daily.



The below diagram illustrates the recorded workflow between ResourceWise price assessor and ResourceWise peer reviewer prior to the publication of any daily price assessment.

# ResourceWise assessment peer review workflow





The hierarchy of management accountability for the creation of assessments and maintenance of input and output record keeping is outlined in ResourceWise's Price Reporting Management System. ResourceWise's Board and management is bound by a published Conflicts of Interest policy contained in ResourceWise's Administrator Code of Conduct.

## Guidelines controlling exercise of judgement by assessors

ResourceWise assessors are required to consider information contributed towards an IOSCO-scope assessment in the strict hierarchy of inputs outlined above. In the event that a ResourceWise assessor is uncertain how to process all or part of the information received on any given day towards an assessment, the assessor may approach an experienced ResourceWise peer reviewer or manager for guidance additional to the oversight guaranteed during the peer review process. The ResourceWise peer reviewer manager will document his or her guidance on the day's assessment through a recorded channel, typically email.

## Assessor training

ResourceWise market analysts undergo a process of documented training to undertake all ResourceWise IOSCO- scope benchmark assessments in compliance with ResourceWise's Hiring and Training guidelines, ResourceWise Management System Appendix 4.

Market analysts are mentored daily by an analyst and price assessor with over ten years' experience of benchmarking and price formation.

Training includes instruction analytics needed to gauge price formation in individual markets, as well as mentored introduction to communication with input contributing counterparties through monitored telephone, Instant Message and Email communications, face-to-face meetings with external contacts and sources, and conference and other educational session attendance.



## **Business continuity**

ResourceWise's assessors are cross trained in named benchmark assessment to ensure than each assessment has several levels of built in redundancy to ensure continuity of assessment production in according with ResourceWise's Business Continuity guidelines, ResourceWise Management System, Appendix 2.

These internal guidelines record a hierarchy of "on call" cover redundancy in the event of sickness or other absences, complete with full contact details in case of emergency. ResourceWise assessors have access to centrally stored instructional manuals on how to produce individual assessments, complete with market contact details to ensure continuity of assessment production. The guidelines also outline procedures for ensuring continuity of benchmark output from premises other than ResourceWise's regular offices.

## Methodology changes

Commodity markets are dynamic. As such, ResourceWise recognizes that its methodologies must keep pace with, and accurately reflect, the timings and specifications governing the most liquid points of trade, requiring periodic adjustments to its published methodologies. ResourceWise will frequently review each assessment, considering the views of relevant stakeholders, to gauge that the named assessment accurately reflects the physical market under assessment.

ResourceWise ensures that any changes to methodology will be made only after substantive consultation with industry stakeholders. Proposed changes will first be published and subject to public scrutiny, giving stakeholders sufficient lead time to make fair comments about the proposed change ahead of any methodological alteration coming into force.

Individual CP and intermediary broker responses to consultations on methodology changes, and ResourceWise's response to those comments, may be published on primamarkets.com, except where the commenter has requested confidentiality. ResourceWise will publicly announce its methodological changes, accompanied by a firm, published, date, from which ResourceWise will apply the changes to individual assessments.



## Corrections procedures

ResourceWise has designed its methodology to maximize the consistency, reliability, and objectivity of its price assessments. All assessments are made based on the information available to ResourceWise prior to the time cut-off for each daily assessment. No information submitted to ResourceWise after the time cut-off for each assessment will be considered retroactively towards a published assessment. If ResourceWise's management deems an assessor to have published an inaccurate assessment, ResourceWise will issue a correction and notify subscribers of the change to the assessed price point, including an explanation as to why the number was changed.

## Change requests

Change requests should be addressed in writing via email to:

prima-enquiries@resourcewise.com

or by mail to the ResourceWise corporate headquarters:

ResourceWise 15720 Brixham Hill Ave. Ste 550 Charlotte, NC 28277 USA

The communication should detail the date and description of the ResourceWise price assessment or assessments being challenged, as well as a detailed outline of the nature and substance of the complaint.

ResourceWise will respond to all complaints as quickly as possible, and no later than within ten working days of their original receipt.

Disputes that fall short of complaints should be handled under the "Corrections Procedure" outlined above.



## ResourceWise primary assessment methodologies

ResourceWise primary assessment methodologies are governed by systems as described in Appendix 1 of the ResourceWise Price Reporting Management System.

#### Asia-Pacific biofuels and feedstocks

#### Korea B Grade ethanol

**Grade**: Industrial ethanol meeting Korean B Grade specifications

Basis: CFR Ulsan, South Korea

Price: USD/cubic metre

Timing: Normalized to 2-6 weeks forward

Cargo size: 1-5,000 cubic metres

Assessment: Daily 08:30 - 17:30 Singapore time

Assessment is for internationally sourced ethanol meeting the Korean B Grade standard in the market standard volumetric unit of cubic metres priced in the market standard currency of US dollars.

To maximize the pool of liquidity considered towards each day's assessment in the typically illiquid Ulsan ethanol market, assessment will take account of trades, bid/offer or shifts in netback values and relevant replacement market fundamentals reported for the full Asian day between 08:00 and 17.30 Singapore. Only trades, bid/offer or shifts in netback values occurring before 17.30 Singapore may be included towards the day's assessment.

Trades must be deemed repeatable in order to be considered towards the assessment. Trades, bids, and offers must be put forward by counterparties eligible to treat with the majority of the market. All transactions must be made at arm's length.

Assessment is based in order of priority on trade, bid/offer, shifts in netback values, and relevant replacement market fundamentals, in order to establish an accurate



gauge of the daily market clearing price.

If several deals are reported the assessment will reflect a volume weighted average price.

The assessment will be weighted to reflect the volume accompanying indications shown, if appropriate. Bids and offers must be deemed executable to be considered towards the assessment.

In the event of significant intra-day volatility, assessments will be weighted to reflect levels prevailing at the close of the day's discussion in accordance with ResourceWise's hierarchy of inputs. In the absence of fresh regional price indications changes in overnight or on-the-day replacement economics in Ulsan's main import sources may be taken into consideration.

### US biofuels, certificates and feedstocks

### LCFS certificates

Pricing is for tradeable certificates issued by the California Air Resources Board (ARB) for compliance with the California Low Carbon Fuel Standard (LCFS).

**Price**: USD for one certificate equivalent to one metric tonne of C02 **Volume**: 1,000 metric tonne CO2e/MJ – 50,000 metric tonne CO2e/MJ

Timing: Normalised to nearby certificate title transfer for 2-6 weeks forward

Assessment: Daily between 08.30 to 12 EST. Prices are weighted towards the morning's close.

Assessment is for LCFS tickets eligible for retirement by registered parties under the California Air Resources Board's electronic repository. The assessment is for CARB's recognized volumetric unit of tonnes CO2e/MJ, priced in the market standard currency of US dollars.

To maximize the pool of liquidity considered towards each day's assessment in the typically illiquid LCFS market, assessment will take account of trades, bid/offer or shifts



in netback values and relevant replacement market fundamentals reported for the full LCFS trading day between 08:00 and 16.30 EST. Trades, bid/offer or shifts in netback values and relevant replacement market fundamentals occurring after 16.30 EST will not be included towards the day's assessment.

Trades must be deemed repeatable in order to be considered towards the assessment. Trades, bids and offers must be put forward by counterparties eligible to treat with the majority of the market. All transactions must be made at arm's length.

Assessment is based in order of priority on trade and bid/offer in order to establish an accurate gauge of the daily market clearing price. Bids and offers must be deemed executable to be considered towards the assessment. The assessment will not typically refer to any separate models or outside extrapolations of value in determining price.

If several deals are reported the assessment will reflect a volume weighted average price.

The assessment will be weighted to reflect the volume accompanying indications shown, if appropriate.

In the event of significant intra-day volatility, assessments will be weighted to reflect levels prevailing at the close of the day's discussion in accordance with ResourceWise's hierarchy of inputs.

#### Distillers Corn Oil (DCO)

**Assessment Point:** FOB Midwest

**Price:** US cents per pound **Assessment:** Weekly **Transportation:** Truck

**Specifications:** 

- FFAs ≤15
- IV >110
- MIU ≤3



### Used Cooking Oil (UCO)

Assessment Point: FOB/Gulf, Midwest, California, East Coast

**Price:** US cents per pound **Assessment:** Weekly

**Transportation:** Rail and Barge

Specifications:FFAs 15 MaxMIU 2 Max

#### Choice White Grease (CWG)

Assessment Point: FOB Central US

**Price**: US cents per pound **Assessment**: Weekly

Transportation: Truck and Rail

Specifications:FFAs 4 Max

MIU 1

Moisture Max 0.20%

### Yellow Grease (YG)

**Assessment Point:** FOB Midwest

**Price:** US cents per pound **Assessment:** Weekly **Transportation:** Truck

Specifications:FFAs 15 MaxMIU 2 Max



#### Tallow (Packer and Renderer)

**Assessment Point:** FOB Midwest

Price: US cents per pound Assessment: Weekly Transportation: Rail Specifications:

FFAs 4 MaxMIU 1 – 1.5

#### T1 Non EU UCO CIF ARA

Pricing is for tradeable physical Used-Cooking Oil (UCO) delivered to ARA ports before customs clearance, supplied by UCO traders or producers accredited with ISCC or other RED certification. The UCO must hold the standard specifications listed below:

### **UCO** specifications

Year-round standard specifications used towards assessment are:

FFA max 5% M&I max 2% Iodine Value min 80 Sulphur max 50

If both FFA 5% information and FFA 6% information are available during the day, 5% information is prioritized towards the assessment

If FFA 5% information is not available but FFA 6% information is available during the day while other specifications are the same as the above stated, 5% FFA value is assessed to be 5 USD above the value of product with 6% FFAs unless otherwise indicated.



**Assessment point:** CIF ARA **Delivery mode**: Flexi bag

Price: USD for one metric tonne of UCO

Timing: Normalised to nearby cargoes titled transfer for 2-6 weeks forward

**Volume:** Normalised to a 500-1000t lot size

Assessment Time: Daily 9am - 4:30pm London time. Where possible prices are weighted towards

the day's close.

### Zero degee CFPP UCOME fob ARA

Pricing is for tradeable physical Used Cooking Oil Methyl Ester (UCOME) barges delivered to ARA ports, all duties paid, accredited by ISCC or other RED certification. The UCOME must hold the standard specifications listed below:

### **UCOME** specifications

Year-round standard specifications used towards assessment are

CFPP Zero degrees Celsius Sulphur max 50ppm Water max 350ppm mg/kg

**Assessment point: FOB ARA** 

**Delivery mode:** Barge

Price: EUR for one metric tonne of UCOME

**Timing:** Normalized to nearby cargoes titled transfer for 2-6 weeks forward

**GHG**: Assessment assumes 91% GHG saving, normalized if liquidity is for UCOME with higher or

lower GHG

**Volume:** Normalized to a 1,000t lot size

Assessment Time: Daily 9am - 4:30pm London time. Where possible prices are weighted

towards the day's close.



### UCO FOB main ports China in flexi bag

**Definition:** Pricing is for tradeable physical Used Cooking Oil (UCO) originated from China, supplied by UCO traders or producers credited with recognized standard RED or RED II sustainability certification

**Regions:** Typical North China ports include Tianjin; Eastern China ports include Suzhou, Shanghai, Taizhou, Yangzhou. Typical South China ports include Huangpu, Shantou, Fangchenggang. Other Chinese port origins can be considered towards assessment.

**Shipping basis:** FOB **Shipping mode:** Flexi

The following terms apply to all the assessment points mentioned above:

### **UCO** specifications

Normal assessed specification, May to August:

FFA max 6%
M&I max 2%
Iodine Value min 80
Sulphur max 50

If both FFA 5% information and FFA 6% information are available during the day, 5% information is prioritized towards the assessment.

If FFA 5% information is not available but FFA 6% information is available during the day while other specifications are the same as the above stated, 5% FFA value is assessed to be 5 USD above the value of product with 6% FFAs unless otherwise indicated.



Normal spec to contribute to assessment, January to April & September to December:

FFA max 5%
M&I max 2%
Iodine Value min 80
Sulphur max 50

Price: USD for one metric tonne of UCO

Timing: Normalized to nearby cargoes titled transfer for 2-6 weeks forward

**Volume:** Normalized to a 500t lot size

Assessment Time: GMT+8 working day. Where possible, prices are weighted towards the day's

close.

### UCO FOB main ports China in bulk

**Definition:** Pricing is for tradeable physical Used Cooking Oil (UCO) originated from China, supplied by UCO traders or producers credited with recognised standard RED or RED II sustainability certification

**Regions:** Typical North China ports include Tianjin; Eastern China ports include Suzhou, Shanghai, Taizhou, Yangzhou. Typical South China ports include Huangpu, Shantou, Fangchenggang. Other Chinese port origins can be considered towards assessment.

**Shipping basis:** FOB **Shipping mode:** Bulk



The following terms apply to all the assessment points mentioned above:

### **UCO** specifications

Year-round standard specifications:

FFA max 5% M&I max 2% Iodine Value min 80 Sulphur max 50

If both FFA 5% information and FFA 6% information are available during the day, 5% information is prioritised towards the assessment

If FFA 5% information is not available but FFA 6% information is available during the day while other specifications are the same as the above stated, 5% FFA value is assessed to be 5 USD above the value of product with 6% FFAs unless otherwise indicated.

Price: USD for one metric tonne of UCO including bulk rental fees

Timing: Normalized to nearby cargoes titled transfer for 2-6 weeks forward

Volume: Normalized to a 1,000t lot size

**Assessment Time:** GMT+8 working day. Where possible, prices are weighted towards the day's

close.

#### POME FOB Southeast Asia

**Definition:** Pricing is for tradeable Palm Oil Mill Effluent (POME) originated from Southeast Asia, supplied by POME traders or producers credited with recognised standard RED or RED II sustainability certification

**Regions:** Indonesian/Malaysian ports

**Shipping basis:** FOB **Shipping mode:** Bulk



The following terms apply to all the assessment points mentioned above:

#### POME specifications

Year-round standard specifications:

Netted back to standard PORAM Palm Acid Oil contract specifications

**Price:** USD for one metric tonne of POME including bulk rental fees

**Timing:** Normalized to nearby cargoes titled for transfer for 2-6 weeks forward

Volume: Normalized to a 1,000t lot size

**Assessment Time:** GMT+8 working day. Where possible, prices are weighted towards the day's

close.

### T2 Cat. 3 Animal Fats Ex-Works Europe

**Definition:** Pricing is for tradeable Cat. 3 Animal Fats (AF3) traded at European plants, excluding freight costs and insurance, accredited by ISCC or other RED certification. The AF3 must hold the standard specifications listed below:

### AF3 specifications

Year-round standard specifications used towards assessment are free fatty acids (ffa) between 4% and 7%.

Assessment includes product originated from the following regions:

Regions: Europe (Spain, Belgium, Netherlands, France, Italy).

**Shipping basis:** Ex-works **Shipping mode:** Trucks



**Price:** EUR for one metric tonne of AF3 not including transportation or insurance **Timing:** Normalized to nearby trucks titled for transfer for 2-6 weeks forward

Volume: Normalized to a 25-200t lot size

Assessment Time: Daily 9am to 4:30 London time. Where possible, prices are weighted towards

the day's close.

### Soapstock Acid Oil CIF ARA

**Definition:** Pricing is for tradeable Soapstock Acid Oil traded at European plants, including freight costs and insurance, accredited by ISCC or other RED certification. The soapstock acid oil must hold the standard specifications listed below:

### Soapstock acid oils specification

It is the Acid Oil extracted from the soapstock using a strong acid (sulfuric acid, in general). Soapstock is the processing residue obtained during chemical refining, using caustic soda, of a crude vegetable oil (such as crude soybean oil) or a crude animal fat (such as BFT or tallow).

FFA: 45 - 70%. S: 150 ppm max. P: 300 ppm max. Water: 0.5% - 2%.

Insoluble impurities: 0.2% - 1%.

Unsaponifiables: 2% - 4%. IV: 110 - 120 glodine/100g.

Assessment includes product originated from the following regions:

Regions: Europe

**Shipping basis:** CIF

Shipping mode: ISO/bulk/flexi



**Price:** USD for one metric tonne of soapstock acid oil including transportation or insurance

**Timing:** Normalized to 2-6 weeks forward **Volume:** Normalized to a 100-2,000t lot size

Assessment Time: 9am to 4:30 London time. Where possible, prices are weighted towards the

day's close.

### High Free Fatty Acids Sewage Sludge CIF ARA

**Definition:** Pricing is for tradeable HFFA Sewage Sludge traded at European plants, including freight costs and insurance, accredited by ISCC or other RED certification. The HFFA Sewage Sludge must hold the standard specifications listed below:

### HFFA Sewage Sludge specifications

The floating material (FOG) from industrial and municipal wastewater treatment plants, after a recovery and dehydration treatment.

FFA: 50 - 100%.

S: 300 ppm – 600ppm P: 200 ppm – 400 ppm Water: 0.2% - 0.5%

Insoluble impurities: 1% - 4% Unsaponifiables: 2% - 4%. IV: 40 – 110 glodine/100g

Assessment includes product originated from the following regions:

**Regions:** Europe

**Shipping basis:** CIF

Shipping mode: ISO/bulk/flexi



Price: USD for one metric tonne of HFFA Sewage Sludge including transportation or insurance

**Timing:** Normalized to 2-6 weeks forward **Volume:** Normalized to a 100-2,000t lot size

Assessment Time: Daily 9am to 4:30 London time. Where possible, prices are weighted towards

the day's close.

#### Marine

#### Rotterdam B30 VLSFO-HBE

**Definition:** Calculated Rotterdam bio-bunker price based on 70% VLSFO, 30% biofuel and a HBE deduction. Prices have been calculated in collaboration with Engine Technologies PTE LTD.

The following terms apply to the assessment points mentioned above:

- VLSFO: Daily Very Low Sulphur Fuel Oil price delivered at the Port of Rotterdam as assessed by Engine Technologies PTE LTD at 3.00pm GMT.
- Biofuel: ResourceWise's daily price for tradeable physical Palm Oil Mill Effluent Methyl Ester (POME-ME) barges delivered to ARA ports, all duties paid, accredited by ISCC or other RED certification.
- HBE: ResourceWise's daily 2024 HBE Advanced (HBE-A) spot price.
- Regions: Ports in the Netherlands.

**Pricing:** USD per metric tonne of bio-blended fuel delivered.

#### Rotterdam B30 LSMGO-HBE

**Definition:** Calculated Rotterdam bio-bunker price based on 70% LSMGO, 30% biofuel and a HBE deduction. Prices have been calculated in collaboration with Engine Technologies PTE LTD.

The following terms apply to the assessment points mentioned above:



- LSMGO: Daily Low Sulphur Marine Gas Oil price delivered at the Port of Rotterdam as assessed by Engine Technologies PTE LTD at 3.00pm GMT.
- Biofuel: ResourceWise's daily price for tradeable physical Palm Oil Mill Effluent Methyl Ester (POME-ME) barges delivered to ARA ports, all duties paid, accredited by ISCC or other RED certification.
- HBE: ResourceWise's daily 2024 HBE Advanced (HBE-A) spot price.
- Regions: Ports in the Netherlands.

**Pricing:** USD per metric tonne of bio-blended marine fuel delivered.

#### ARA B30 VLSFO-UCOME

**Definition:** Calculated ARA bio-bunker price based on 70% VLSFO and 30% biofuel. Prices have been calculated in collaboration with Engine Technologies PTE LTD.

The following terms apply to the assessment points mentioned above:

- VLSFO: Daily Very Low Sulphur Fuel Oil price delivered at the Port of Rotterdam as assessed by Engine Technologies PTE LTD at 3.00pm GMT.
- Biofuel: ResourceWise's daily price for tradeable physical Used Cooking Oil Methyl Ester (UCOME) barges delivered to ARA ports, all duties paid, accredited by ISCC or other RED certification. View ResourceWise's Zero-degree CFPP UCOME fob ARA methodology.
- Regions: Ports in the Netherlands.

**Pricing:** USD per metric tonne of bio-blended marine fuel delivered.

#### ARA B30 LSMGO-UCOME

**Definition:** Calculated ARA bio-bunker price based on 70% LSMGO and 30% biofuel. Prices have been calculated in collaboration with Engine Technologies PTE LTD.

The following terms apply to the assessment points mentioned above:

• LSMGO: Daily Low Sulphur Marine Gas Oil price delivered at the Port of Rotterdam as assessed by Engine Technologies PTE LTD at 3.00pm GMT.



- Biofuel: ResourceWise's daily price for tradeable physical Used Cooking Oil Methyl Ester (UCOME) barges delivered to ARA ports, all duties paid, accredited by ISCC or other RED certification. View ResourceWise's Zero-degree CFPP UCOME fob ARA methodology.
- Regions: Ports in the Netherlands.

**Pricing:** USD per metric tonne of bio-blended marine fuel delivered.

#### Singapore B24 VLSFO-UCOME

**Definition:** Calculated Singapore bio-bunker price based on 76% VLSFO and 24% biofuel including freight. Prices have been calculated in collaboration with Engine Technologies PTE LTD.

The following terms apply to the assessment points mentioned above:

- VLSFO: Daily Very Low Sulphur Fuel Oil price delivered at the Port of Singapore as assessed by Engine Technologies PTE LTD at 3.00pm GMT.
- Biofuel: ResourceWise's daily price for tradeable physical Used Cooking Oil Methyl Ester (UCOME) barges delivered to Chinese ports, all duties paid, accredited by ISCC or other RED certification.
- Freight: China-Singapore shipping rate assessed by Engine Technologies PTE LTD at on a weekly basis.
- Regions: The Port of Singapore.

**Pricing:** USD per metric tonne of bio-blended marine fuel delivered.

#### Singapore B24 LSMGO-UCOME

**Definition:** Calculated Singapore bio-bunker price based on 76% LSMGO and 24% biofuel including freight. Prices have been calculated in collaboration with Engine Technologies PTE LTD.

The following terms apply to the assessment points mentioned above:

• LSMGO: Daily Los Sulphur Marine Gasoil price delivered at the Port of Singapore as assessed by Engine Technologies PTE LTD at 3.00pm GMT.



- Biofuel: ResourceWise's daily price for tradeable physical Used Cooking Oil Methyl Ester (UCOME) barges delivered to Chinese ports, all duties paid, accredited by ISCC or other RED certification.
- Freight: China-Singapore shipping rate assessed by Engine Technologies PTE LTD at on a weekly basis.
- Regions: The Port of Singapore.

**Pricing:** USD per metric tonne of bio-blended marine fuel delivered.

#### LA B30 VLSFO-UCOME

**Definition:** Calculated Los Angeles bio-bunker price based on 70% VLSFO and 30% biofuel. Prices have been calculated in collaboration with Engine Technologies PTE LTD.

The following terms apply to the assessment points mentioned above:

- VLSFO: Daily Very Low Sulphur Fuel Oil price delivered at the Port of Los Angeles as assessed by Engine Technologies PTE LTD at 3.00pm GMT.
- Biofuel: ResourceWise's daily price for tradeable physical Used Cooking Oil Methyl Ester (UCOME) barges delivered to LA ports, all duties paid, accredited by IPA/ LCFS certification.
- Regions: The Port of Los Angeles.

**Pricing:** USD per metric tonne of bio-blended marine fuel delivered.

#### LA B30 LSMGO-UCOME

**Definition:** Calculated Los Angeles bio-bunker price based on 70% LSMGO and 30% biofuel. Prices have been calculated in collaboration with Engine Technologies PTE LTD.

The following terms apply to the assessment points mentioned above:

- LSMGO: Daily Low Sulphur Marine Gas Oil delivered at the Port of Los Angeles as assessed by Engine Technologies PTE LTD at 3.00pm GMT.
- Biofuel: ResourceWise's daily price for tradeable physical Used Cooking Oil Methyl Ester (UCOME) barges delivered to LA ports, all duties paid, accredited by IPA/ LCFS certification.



• Regions: The Port of Los Angeles.

**Pricing:** USD per metric tonne of bio-blended marine fuel delivered.