



- i. Key Points
- ii. Introduction
- iii. Answers to Questions

iv. Annexes

- About WMBA and LEBA
- WMBA Indices SONIA, EURONIA, RONIA
- LEBA Indices Gas, Power, Carbon

Key Points

- WMBA/LEBA believe that where a benchmark is entirely objective and is formed from the aggregation and averaging of real authorised transactions, then an exemption should be defined under the provisions of the regulated activities order.
- Aggregated and averaged daily series of traded rates such as OIS, compiled by the WMBA across all relevant venues, can provide a tool to inform a benchmark curve to service market users.
- The new definition of "consumer" appears very broad to the WMBA.
- The definition of "providing information" would also appear to the WMBA as being overly broad.

Introduction

The Wholesale Markets Brokers' Association (WMBA) and the London Energy Brokers' Association (LEBA) (jointly referred to in this document as the 'WMBA') are the European industry associations for the wholesale intermediation of Over-the-Counter (OTC) markets in financial, energy, commodity and emissions markets and their traded derivatives. Our members are Limited Activity and Limited Licence firms that act solely as intermediaries in wholesale financial markets.

The WMBA considers it appropriate to reply for two reasons. Firstly, whilst not direct contributors on LiBOR panels, WMBA members are active in arranging liquidity and executing the majority of trades across all the relevant markets including Cash Deposits, Money Market and Interest Rate Swaps (IRS). Secondly, the WMBA collates and publishes a large set of indices daily in overnight index swaps (OIS), and in repo and energy related markets. These provide settlement prices to a





significant part of the OTC markets and also form the basis for variation margin for a number of CCPs. These indices are based on actual bids/offers and traded prices and are detailed in the annex.

1 Do you have views on the assessment of the likely impact of these draft amendments, as outlined in Annex D?

WMBA notes that it is hard to measure or assess any impact, principally since the LIBOR markets beyond the very short dates have ceased to trade altogether. Therefore, this association thinks that interbank cash markets are too illiquid for any impact assessment and the formation of useful judgements.

2 Do you have views on the definition and scope of the proposed regulated activities, including the draft exception provisions, in the draft Regulated Activities Order?

Indices from Actual Transactions

The WMBA collate indices put together by aggregating and volume weighting actual transactions over a pre-defined period of time and across all eligible venues. These are detailed in the annex. We believe that the exception provisions should additionally include such indices (SONIA for example) where the inputs and publishing are entirely objective and mathematical.

It may be then asked by the UK authorities, "can these benchmarks still be manipulated?" Should the answer be 'yes' (for example, if a firm or firms transact with the aim of these transactions manipulating the benchmark) then this could indeed warrant a call for legislation. The WMBA, however, believe that is not the case and that the answer here lies in the market abuse directive which already covers this behaviour adequately. This is because the focus is on the transaction and not the index.

Beyond duplicative legislation, there is also a cross border issue here that the transactions forming a benchmark in the UK do not need to be made in the UK, may not be transacted by UK authorised participants and may not be conducted through a UK authorised venue or arranger ('PPAT'). Further, the compiler of the benchmark could not spot and adjust for such behaviour, since they do not see the names and motives of the participants.

At a minimum, the WMBA requests an explicit requirement for the regulator to consult prior to amending the scope to include any other benchmarks.

The new definition of "consumer"

This definition appears very broad to the WMBA as it is amended to include "*have rights, interests or obligations that are affected by the level of the regulated benchmark*". Unless there is a precise legal definition of "rights, interests of obligations", we note that this could include just about anyone





who has a loan or mortgage, the rate of which is even tangentially derived from a benchmark. It is likely that it has been drafted in this way to mirror the authorities' objective relating to consumer protection across the new financial supervision legislation in the UK. However, it could easily be interpreted as giving consumers a right to litigate such as the class actions against those who contribute to or administer a benchmark we have witnessed in the US recently.

The definition of "providing information"

This definition would also appear to the WMBA as being overly broad. We are concerned that the wording "expression of opinion" could inadvertently capture our member firms' hybrid and voice broker activities. These concerns would be heightened, especially if further benchmarks are brought within scope.

It may be that there is sufficient narrowing of scope from the provision that this must be "*required in connection with the determination of the regulated benchmark*". A possible amendment to the language under 2.11 is below.

"providing information" in relation to a regulated benchmark means providing any information or expression of opinion that is:

- i. provided to, or for the purposes of passing to, a person who has permission to carry out the activity specified in paragraph (1)(b) in relation to that regulated benchmark, and
- ii. required in connection with the determination of the regulated benchmark, and
- iii. provided for that purpose.

3 Do you agree that the specification in Schedule 5 of the draft Regulated Activities Order is an accurate description of LIBOR?

WMBA agrees with the specification.

4 Do you have views on the proposed transitional provisions contained in the draft Regulated Activities Order?

2.21: Evidently the risks here are that the contributing banks see no marginal benefit, but substantial and present risks in continuing to contribute. Evidently the use of mandating could be brought to bear, but this raises the 'Schrödinger Question' of quite what, in that instance you are actually measuring.

5 Do you have any views on the content of the new 'misleading statements' Order?

WMBA had grave concerns that the draft legislation may conflagrate genuine errors or unforeseen circumstances as a new 'misleading statement'. However, we are satisfied that the text suitably defines the intent to mislead and we hope that demonstrable evidence will be required to prove





such intent. As risk here is the volition on the part of the market to remain active participants and so serve the needs to the wider global market place for investments.

6 Do you have views as to whether the Government should specify benchmarks other than LIBOR as regulated benchmarks and/or specify benchmarks other than LIBOR as relevant benchmarks for the purposes of the new criminal offence?

We refer back to the issues made above, that indices such as SONIA which are algebraic outputs rather than estimated rates do not require statute legislation.

Further, there are geographical and supervisory issues raised by resorting to legislation as opposed to conduct and accord led principles. Most wholesale markets are global rather than domestic and the relevant index or benchmark could be published in a third country. For this reason, it is supervision of authorised participants which should do the lifting here rather than the legislation of a published number. Firms putting their own capital or that of clients, or client monies, at risk against a benchmark considered 'more risky' may simply be charged more Pillar2 capital against that in the manner which currently occurs.

To this end, we find the rush and requirement for statute regulation to duplicate supervision a difficult route to endorse and likely fraught with moral hazard as well as extra costs and legal complications. Specifically we note that extraterritorial import of other such related benchmarks would multiply the difficulties (For example, what if the oil price was regulated in parallel across jurisdictions?) How could that be treated in the UK and would that not lead to a political desire in many jurisdictions to start to seek also to regulate the quantum of the price published – which to our minds would soon lead to the 'rationing' of quantities allotted and market failure?





Annexes

Wholesale Markets Brokers' Association & London Energy Brokers' Association

The Wholesale Markets Brokers' Association (WMBA) and the London Energy Brokers' Association (LEBA) (co-referred to in this document as the 'WMBA') are the European industry associations for the wholesale intermediation of Over-the-Counter (OTC) markets in financial, energy, commodity and emissions markets and their traded derivatives. Our members are Limited Activity and Limited Licence firms that act solely as intermediaries in the said wholesale financial markets. As Interdealer Brokers (IDBs), the WMBA members' principal client base is made up of global banks and primary dealers. The replies below to the questions in the paper should be seen in the context of WMBA members acting exclusively as intermediaries and not as own account traders. (Please see <u>www.wmba.org.uk</u> and <u>www.leba.org.uk</u> for information about the associations, its members and products.) For this reason, some of the questions in the Consultation Paper are not entirely relevant to WMBA members' activities even though they are to most of their clients. Further, some answers take into account industry views and experience.

Operating as the hub of the global financial market infrastructure, IDBs are MiFID compliant and highly regulated intermediaries by virtue of their regulatory authorisation and from being subject to supervision under CAD. Our members are neutral, independent, and multi-lateral, and provide free, fair and open access to their trading venues for all suitably authorised and regulated market participants. IDBs do not take positions in the markets in which they operate and their collective service as the gateway to the global financial marketplace creates price discovery and significant liquidity. All transactions, whether executed via voice, hybrid or fully electronic means, are immediately captured at the point of trade, are subject to straight-through-processing and are made available for transparent and timely transaction reporting to the relevant regulators.

WMBA Members:

- BGC Partners
- EBS Group Ltd
- GFI Group Inc
- Gottex Brokers SA
- ICAP plc
- Martin Brokers (UK) Ltd
- Reuters Transaction Services Ltd
- Sterling International Brokers Ltd
- Sunrise Brokers Ltd
- Tradition (UK) Ltd
- Tullett Prebon plc
- Vantage Capital Markets LLP

LEBA Members:

- BGC Partners
- Evolution Markets Ltd
- GFI Group, Inc
- ICAP Energy Ltd
- PVM Oil Associates Ltd
- Spectron Group Ltd
- Tradition Financial Services Ltd
- Tullett Prebon Energy Ltd

For further information please visit www.wmba.org.uk and www.leba.org.uk





WMBA Indices – SONIA, EURONIA, RONIA

Sterling Overnight Index Average ("SONIA")

Introduced in March 1997, SONIA is the Sterling Overnight Index Average ("SONIA"). The index tracks actual market overnight funding rates.

SONIA is the weighted average rate to four decimal places of all unsecured sterling overnight cash transactions brokered in London by contributing WMBA member firms between midnight and 4.15pm with all counterparties in a minimum deal size of £25 million.

The index is a weighted average overnight deposit rate for each business day. Each rate in the average is weighted by the principal amount of deposits which were taken on that day.

DATA VENDORS: SONIA is available to view by subscription and is also available on the following data vendor pages: Thomson Reuters, SONIA1; Bloomberg, WMBA.

Contributing Brokers: ICAP plc, Martin Brokers (UK) Ltd, Sterling International Brokers Ltd, Tradition (UK) Ltd, and Tullett Prebon plc.

Definition of an Overnight Indexed Swap (OIS): An OIS is a fixed rate interest rate swap against a floating rate index, e.g. SONIA. It replicates a mismatched deposit position through either: a short-term loan funded by an overnight deposit, or an overnight loan funded by a short-term deposit. In this way, OIS allow banks to manage their liquidity requirements more effectively.

Required documentation: OIS structures are completed using International Swaps and Derivatives Association (ISDA) documentation. Click <u>here</u> to view the ISDA SONIA definition.

Euro Overnight Index Average ("EURONIA")

Introduced in January 1999, EURONIA is the Euro Overnight Index Average ("EURONIA"). This index tracks actual market overnight funding rates.

EURONIA is the weighted average rate to four decimal places of all unsecured euro overnight cash transactions brokered in London by contributing WMBA member firms between midnight and 4.00pm with all counterparties in a minimum deal size of £25 million.

The index is a weighted average overnight deposit rate for each business day. Each rate in the average is weighted by the principal amount of deposits which were taken on that day.

DATA VENDORS: EURONIA is available to view by subscription and is also available on the following data vendor pages: Thomson Reuters, EURONIA1; Bloomberg, WMBA.





Contributing Brokers: ICAP plc, Martin Brokers (UK) Ltd, Sterling International Brokers Ltd, Tradition (UK) Ltd, and Tullett Prebon plc.

Definition of an Overnight Indexed Swap (OIS): An OIS is a fixed rate interest rate swap against a floating rate index, e.g. EURONIA. It replicates a mismatched deposit position through either: a short-term loan funded by an overnight deposit, or an overnight loan funded by a short-term deposit. In this way, OIS allow banks to manage their liquidity requirements more effectively.

Required documentation: OIS structures are completed using International Swaps and Derivatives Association (ISDA) documentation. Click <u>here</u> to view the ISDA EURONIA Definition.

Repurchase Overnight Index Average ("RONIA")

Introduced in 2011, RONIA is the Repurchase Overnight Index Average ("RONIA"). This index tracks actual market overnight funding rates.

RONIA is the weighted average rate to four decimal places of all secured sterling overnight cash transactions brokered in London by contributing WMBA member firms between midnight and 4.15pm with all counterparties with no minimum deal size.

RONIA eligible transactions are Delivery by Value (DBV) which is a mechanism whereby a CREST member who has borrowed money against overnight gilt collateral may have gilts on its account to the required value delivered automatically by the system to the CREST account of the money lender.

The index is a weighted average overnight deposit rate for each business day. Each rate in the average is weighted by the principal amount of deposits which were taken on that day.

DATA VENDORS: RONIA is available to view by subscription and is also available on the following data vendor pages: Thomson Reuters, RONIA1; Bloomberg, WMBA.

Contributing Brokers; BGC Partners, ICAP Plc, Martin Brokers (UK) Ltd, Sterling International Brokers Ltd, Tradition (UK) Ltd, Tullett Prebon plc.

Definition of a Secured Overnight Index Swap (SOIS): A Secured Overnight Index Swap (SOIS) is a repurchase agreement in which securities are sold provided that they will be repurchased on the following day. Financial institutions use overnight repos as a means of raising short-term money for financing inventories through either: a short-term loan funded by an overnight deposit, or an overnight loan funded by a short-term deposit. In this way, SOIS allow banks to manage their liquidity requirements more effectively.

Required documentation: SOIS structures are completed using International Swaps and Derivatives Association (ISDA) documentation. Click <u>here</u> to view the ISDA RONIA Definition.





LEBA Indices – Gas, Power, Carbon

LEBA Carbon Indices

The LEBA Carbon Indices were introduced in March 2005 covering European Union Allowances (EUA) and Certificates of Emission Reduction (CER). The Indices are the volume weighted averages of all transactions during a given period or during the whole of the day, dependent on the particular index. Closing prices are the averages of all indications obtained from all the contributing members. For full details of each index, please see the specifications below.

Contributing Brokers: Evolution Markets Limited, GFI Brokers Ltd, ICAP Energy, Marex Spectron Ltd, Tradition Financial Services Ltd, Tullett Prebon Energy

LEBA Carbon EUA Index; Price Calculation Methodology

LEBA Carbon EUA - Daily Index: The Index price will be calculated every trading day using the volume-weighted average of EUA trades transacted by LEBA firms for physical delivery on any relevant forward periods, and any associated Strip Prices.

LEBA Carbon EUA – 08:00 to 10:00 Index: The Index price will be calculated every trading day using the volume-weighted average of EUA trades transacted by LEBA firms for physical delivery on the first two nearby annual forward delivery periods between 08:00am and 10:00am.

LEBA Carbon EUA – Spot Index: The Index price will be calculated every trading day using the volume-weighted average of EUA trades transacted by LEBA firms for physical delivery on Spot.

LEBA Carbon EUA – **Daily Closing Prices:** Closing Prices will be calculated every trading day using price assessments collected directly from contributing member firms at around 17.00 London time. Additional prices may be collected from contributing members at regular intervals during the course of the trading day.

LEBA Carbon CER Index: Price Calculation Methodology

LEBA Carbon CER- Daily Index: The Index price will be calculated every trading day using the volume-weighted average of CER trades transacted by LEBA contributing member firms for spot physical delivery on any relevant forward periods, and any associated Strip Prices.

LEBA Carbon CER – Daily Closing Prices: Closing Prices will be calculated every trading day using price assessments collected directly from contributing member firms at around 17.00 London time. Additional prices may be collected from contributing members at regular intervals during the course of the trading day.

LEBA Power Indices





LEBA started compiling indices covering the European power markets in 2003. LEBA publish indices covering the prompt UK power market up to one month ahead. The LEBA UK Power Prompt Indices were introduced in July 2003 initially covering Day Ahead and Week Ahead UK Power. The indices are the volume weighted averages of all transactions during a given period or during the whole of the day, dependent on the particular index. A Month Ahead window index was added in 2010. For full details of each index, please see the specification below. LEBA will commence the publication of additional indices covering the UK and Continental European power markets in the near future.

Contributing Brokers: GFI Brokers Ltd, ICAP Energy, Marex Spectron Ltd, Tullett Prebon Energy

All LEBA UK Power Indices will be published daily at approximately 18.00hrs London time on the LEBA website (except where indicated *)

Baseload Indexes:

Day Ahead (7.30 - 9.00am): Calculated using a volume-based, weighted average of all day ahead baseload trades executed in London by contributing brokers between 07.30 hrs and 09.00 hrs London time each day. The Index values electricity trades for baseload delivery on the day following the deal date (Trade Day). The delivery day is the Index day. Weekends shall not be included in the Index. In the calculation of the Index, previous business day convention shall apply.

Day Ahead Weekend Index (7.30 - 9.00am): Calculated using a volume-based, weighted average of all weekend ahead baseload trades executed in London by contributing brokers between 07.30 hrs and 09.00 hrs London time each day. The Index values electricity trades for baseload delivery on the weekend following the deal date (Trade Day). The delivery days are the Index days. In the Index, weekends shall be calculated using a volume-based, weighted average of all weekend trades executed in London by contributing brokers between 07.30 hrs and 09.00 hrs London time on the previous business day. In the calculation of the Index, previous business day convention shall apply.

Working Days Index (7.30am – 5.00pm): Calculated using a volume-based, weighted average of all day ahead baseload trades executed in London by contributing brokers between 07.30hrs and 17.00hrs London time on Trade Day. The Index values electricity trades for baseload delivery on the working day following Trade Day. The delivery day is the Index day. Weekends shall not be included in the Index. In the calculation of the Index, previous business day convention shall apply.

Day Ahead Weekend Index (7.30am – 5.00pm): Calculated using a volume-based, weighted average of all weekend ahead baseload trades executed in London by contributing brokers between 07.30hrs and 17.00hrs London time each day. The Index values electricity trades for baseload delivery on the weekend following the deal date (Trade Day). The delivery days are the Index days. In the Index, weekends shall be calculated using a volume-based, weighted average of all weekend trades executed in London by contributing brokers between 07.30hrs and 17.00hrs London time on the previous business day. In the calculation of the Index, previous business day convention shall apply.





All Days Saturday Index (7.30am – 5.00pm): Calculated using a volume-based, weighted average of all Saturday baseload trades executed in London by contributing brokers between 07.30hrs and 17.00hrs London time each day. The Index values electricity trades for baseload delivery on Saturday following the deal date (Trade Day). The delivery days are the Index days. In the Index, Saturday shall be calculated using a volume-based, weighted average of all Saturday trades executed in London by contributing brokers between 07.30hrs and 17.00hrs London time on the previous business day. In the calculation of the Index, previous business day convention shall apply.

All Days Sunday Index (7.30am – 5.00pm): Calculated using a volume-based, weighted average of all Sunday baseload trades executed in London by contributing brokers between 07.30hrs and 17.00hrs London time each day. The Index values electricity trades for baseload delivery on Sunday following the deal date (Trade Day). The delivery days are the Index days. In the Index, Sunday shall be calculated using a volume-based, weighted average of all Sunday trades executed in London by contributing brokers between 07.30hrs and 17.00hrs London time on the previous business day. In the calculation of the Index, previous business day convention shall apply.

Month Ahead Window Index (4.00 – 4.15pm): Calculated using a volume-based, weighted average of all month-ahead baseload trades executed in London by contributing brokers between 16.00hrs and 16.15 hrs London time each trading day. The Month Ahead Window Index values baseload trades for delivery in the EFA month following the EFA month in which the deal is executed. The index month is the delivery month e.g. the index published on the 17 June 2009 is based on all the trades executed on the 17 June 2009 for delivery every day during the EFA month of July 2009.

Month Ahead Window Index Average: Calculated once a month on the last trading day of the EFA month e.g. in EFA month July 2009 the Month Ahead Index will refer to EFA August 2009. At the end of EFA July 2009 (Friday 24th July) LEBA will publish the Month Ahead Window Index Average for August 2009 as well as the Month Ahead Window Index for that day. It will be calculated by taking the average of all the individual daily Month Ahead Window indices for the relevant EFA month. The Index will also include a total volume figure for that month in addition to the Index. * The Index will be published at approximately 18.00hrs London time on the last trading day of the EFA month on the LEBA website.

Block Indexes:

Monday – Friday Peak Blocks 3&4&5 Index (7.30am – 9.00am): Calculated using a volume-based, weighted average of all day ahead peak blocks 3&4&5trades executed in London by contributing brokers between 0730hrs and 0900hrs London time on Trade Day. The Index values electricity trades for peakload delivery on the working day following Trade Day. The delivery day is the Index day. In the calculation of the Index, previous business day convention shall apply.

Monday – Friday Blocks 1&2 Index (7.30am – 9.00am): Calculated using a volume-based, weighted average of all day ahead blocks 1&2 trades executed in London by contributing brokers between 0730hrs and 0900hrs London time on Trade Day. The Index values electricity trades for block delivery on the working day following Trade Day. The delivery day is the Index day. In the calculation of the Index, previous business day convention shall apply.





Monday – Friday Blocks 3&4 Index (7.30am – 9.00am): Calculated using a volume-based, weighted average of all day ahead blocks 3&4 trades executed in London by contributing brokers between 0730hrs and 0900hrs London time on Trade Day. The Index values electricity trades for block delivery on the working day following Trade Day. The delivery day is the Index day. In the calculation of the Index, previous business day convention shall apply.

Monday – Friday Block 5 Index (7.30am – 9.00am): Calculated using a volume-based, weighted average of all day ahead block 5 trades executed in London by contributing brokers between 0730hrs and 0900hrs London time on Trade Day. The Index values electricity trades for block delivery on the working day following Trade Day. The delivery day is the Index day. In the calculation of the Index, previous business day convention shall apply.

Monday – Friday Block 6 Index (7.30am – 9.00am): The Monday – Friday Block 6 Index (7.30am – 9.00am) is calculated using a volume-based, weighted average of all day ahead block 6 trades executed in London by contributing brokers between 0730hrs and 0900hrs London time on Trade Day. The Index values electricity trades for block delivery on the working day following Trade Day. The delivery day is the Index day. In the calculation of the Index, previous business day convention shall apply.

Monday – Friday Peak Blocks 3&4&5 Index (7.30am – 5.00pm): Calculated using a volume-based, weighted average of all day ahead peak blocks 3&4&5 trades executed in London by contributing brokers between 0730hrs and 1700hrs London time on Trade Day. The Index values electricity trades for peakload delivery on the working day following Trade Day. The delivery day is the Index day. In the calculation of the Index, previous business day convention shall apply.

Weekend Peak Blocks 3&4&5 Index (7.30am – 9.00am): Calculated using a volume-based, weighted average of all weekend peak blocks 3&4&5trades executed in London by contributing brokers between 0730hrs and 0900hrs London time on Trade Day. The Index values electricity trades for peak load delivery on the weekend following the deal date (Trade Day). The delivery days are the Index days. In the calculation of the Index, previous business day convention shall apply.

Weekend Blocks 1&2 Index (7.30am – 9.00am): Calculated using a volume-based, weighted average of all weekend blocks 1&2 trades executed in London by contributing brokers between 0730hrs and 0900hrs London time on Trade Day. The Index values electricity trades for blocks 1&2 delivery on the weekend following the deal date (Trade Day). The delivery days are the Index days. In the calculation of the Index, previous business day convention shall apply.

Weekend Blocks 3&4 Index (7.30am – 9.00am): Calculated using a volume-based, weighted average of all weekend blocks 3&4 trades executed in London by contributing brokers between 0730hrs and 0900hrs London time on Trade Day. The Index values electricity trades for blocks 3&4 delivery on the weekend following the deal date (Trade Day). The delivery days are the Index days. In the calculation of the Index, previous business day convention shall apply.





Weekend Block 5 Index (7.30am – 9.00am): Calculated using a volume-based, weighted average of all weekend block 5 trades executed in London by contributing brokers between 0730hrs and 0900hrs London time on Trade Day. The Index values electricity trades for block 5 delivery on the weekend following the deal date (Trade Day). The delivery days are the Index days. In the calculation of the Index, previous business day convention shall apply.

Weekend Block 6 Index (7.30am – 9.00am): Calculated using a volume-based, weighted average of all weekend block 5 trades executed in London by contributing brokers between 0730hrs and 0900hrs London time on Trade Day. The Index values electricity trades for block 6 delivery on the weekend following the deal date (Trade Day). The delivery days are the Index days. In the calculation of the Index, previous business day convention shall apply.

Weekend Block 6 Index (7.30am – 9.00am): Calculated using a volume-based, weighted average of all weekend block 5 trades executed in London by contributing brokers between 0730hrs and 0900hrs London time on Trade Day. The Index values electricity trades for block 6 delivery on the weekend following the deal date (Trade Day). The delivery days are the Index days. In the calculation of the Index, previous business day convention shall apply.

LEBA Coal Pricing Indices

The LEBA Coal Pricing Indices were introduced in September 2010 covering API 2 OTC Cleared CIF Rotterdam Coal Swap Contract and API 4 Cleared FOB Richards Bay Coal Swap Contract. The LEBA Coal pricing Indices are the averages of indications provided by all contributing member companies. For full details of each aspect of the index, please see the specification below.

Contributing Brokers: GFI Brokers Ltd, ICAP Energy, Marex Spectron Ltd, Tradition Financial Services Ltd, Tullett Prebon Energy

OTC Cleared CIF Rotterdam Coal Swap Contract: Description: CIF Rotterdam coal swap contract API 2 quality. Currency: US (\$). Minimum Tick Size: Five cents per tonne, \$0.05/tonne. Contract Series: Front 4 contract months, the front 4 to 7 quarter contracts (i.e. quarter contracts up to the end of the front calendar year), 5 season contracts and up to 4 calendar years. Expiry Day: Month contracts will cease trading at the close of business on the last Friday of the contract delivery period. Quarters, seasons and calendar years cease trading as a quarter/season/calendar year at the close of business on the last Friday of the first month contract in that quarter/season/calendar year.

OTC Cleared FOB Richards Bay Coal Swap Contract: Description: Cash settled FOB Richards Bay coal swap contract API 4 quality. Currency: US (\$). Minimum Tick Size: Five cents per tonne, \$0.05/tonne. Contract Series: Front 4 contract months, the front 4 to 7 quarter contracts (i.e. quarter contracts up to the end of the front calendar year), 5 season contracts and up to 4 calendar years. Expiry Day: Month contracts will cease trading at the close of business on the last Friday of the contract delivery period. Quarters, seasons and calendar years cease trading as a quarter/season/calendar year at the close of business on the last Friday of the first month contract in that quarter/season/calendar year.





OTC Cleared API 2 Coal Options Contract: Description: Cash settled Premium Paid Option on the underlying API 2 Forward contract for the corresponding expiry. Currency: US (\$). Pricing: US (\$) and cents per metric tonne. Minimum Tick Size: \$0.01 per tonne. Option Type: Options are European style single expiry options. Last Trading Day: 17:00 hours UK time on the first working day of the month prior to commencement of the underlying forward swap contract. Contract Series: 3 to 7 quarter contracts and 3 whole tradable calendar contracts. All option contracts expire into the underlying contract of the corresponding contract series. Business Days: UK business days.

OTC Cleared API 4 Coal Options Contract: Description: Cash settled Premium Paid Option on the underlying API 4 Forward contract for the corresponding expiry. Currency: US (\$). Pricing: US (\$) and cents per metric tonne. Minimum Tick Size: \$0.01 per tonne. Option Type: Options are European style single expiry options. Last Trading Day: 17:00 hours UK time on the first working day of the month prior to commencement of the underlying forward swap contract. Contract Series: Front 3 to 7 tradable quarter contracts and 3 whole tradable calendar contracts. All option contracts expire into the underlying contract of the corresponding month. Business Days: UK business days.

Index Publication: LEBA member firms will submit their marks for each current trading period to LEBA at the end of every trading day for calculation. The marks will then be averaged and an Index of that average published.

LEBA will endeavour to publish the Indexes at 18:30 London time on the London business day of the trading day, and may publish the Indexes on the LEBA website on or after that time. However, LEBA does not guarantee to be able to publish the data by this time. LEBA will not publish on days that are not trading days, but will publish the Index on the next London business day. Last Trading Day: 17:00 hours UK time on the first working day of the month prior to commencement of the underlying forward swap contract.

LEBA European Gas Pricing Indices

The LEBA European Gas Pricing Indices were introduced in June 2006 with the daily calculation of the TTF day ahead and weekend indices. CEGH, NCG, GPI, Peg North, PEG South, PSV and Zeebrugge were subsequently added. The LEBA European Gas Pricing Indices are the weighted average day ahead and weekend trades transacted through LEBA members. For full details of each aspect of the indices, please see the respective specifications below.

Contributing Brokers: GFI Brokers Ltd, ICAP Energy, Marex Spectron Ltd, Tradition Financial Services Ltd, Tullett Prebon Energy

LEBA Zeebrugge Pricing Index: Price Calculation Methodology

Day-ahead Index: The Day-ahead Index is calculated using a volume-based, weighted average of all Day-ahead trades executed in London by contributing brokers between 08:00 and 17:00 hours London time each day. The Index values gas trades for delivery on the day, or days in the case of





weekends, following the deal date (Trade Day). The delivery day is the Index day. In the Index, weekends shall be calculated using a volume-based, weighted average of all weekend trades executed in London by contributing brokers between 08:00 and 17:00 hours London time on the previous business day. In the calculation of the Index, previous business day convention shall apply.

Day-ahead Window Index: The Day-ahead Index is calculated using a volume-based, weighted average of all Day-ahead trades executed in London by contributing brokers between 16:20:00 hours and 16:30:00 hours London time each day. The Index values gas trades for delivery on the day, or days in the case of weekends, following the deal date (Trade Day). The delivery day is the Index day. In the Index, weekends shall be calculated using a volume-based, weighted average of all weekend trades executed in London by contributing brokers between 16:20:00 hours and 16:30:00 hours London time on the previous business day. In the calculation of the Index, previous business day convention shall apply.

Month Ahead Index: The Month Ahead Index is calculated using a volume-based, weighted average of all Month- ahead trades executed in London by contributing brokers between 08:00 hours and 17:00 hours London time each day. The Index values gas trades for delivery within the month following the deal date (Trade Day). The delivery month is the Index month. In the calculation of the Index, previous business day convention shall apply.

Trades to be included in the Index: LEBA Zeebrugge Indexes: For a trade to be included in the Index it must occur on a trading day between 08:00 and 17:00 London time, on the trade date. If other delivery dates become liquid then these also will be calculated in addition to the dates above. For the purposes of these Indexes, trading days are every day except Saturday, Sunday, New Years Day, Good Friday, Easter Monday, Christmas Day and Boxing Day.

LEBA TTF Pricing Index: Price Calculation Methodology

Day-ahead Index: The Day-ahead Index is calculated using a volume-based, weighted average of all Day-ahead trades executed in London by contributing brokers between 08:00 and 17:00 hours London time each day. The Index values gas trades for delivery on the day, or days in the case of weekends, following the deal date (Trade Day). The delivery day is the Index day. In the Index, weekends shall be calculated using a volume-based, weighted average of all weekend trades executed in London by contributing brokers between 08:00 and 17:00 hours London time on the previous business day. In the calculation of the Index, previous business day convention shall apply.

Day-ahead Window Index: The Day-ahead Index is calculated using a volume-based, weighted average of all Day-ahead trades executed in London by contributing brokers between 16:20:00 hours and 16:30:00 hours London time each day. The Index values gas trades for delivery on the day, or days in the case of weekends, following the deal date (Trade Day). The delivery day is the Index day. In the Index, weekends shall be calculated using a volume-based, weighted average of all weekend trades executed in London by contributing brokers between 16:20:00 hours and 16:30:00 hours London time on the previous business day. In the calculation of the Index, previous business day convention shall apply.





Month Ahead Index: The Month Ahead Index is calculated using a volume-based, weighted average of all Month- ahead trades executed in London by contributing brokers between 08:00 hours and 17:00 hours London time each day. The Index values gas trades for delivery within the month following the deal date (Trade Day). The delivery month is the Index month. In the calculation of the Index, previous business day convention shall apply.

Trades to be included in the Index: LEBA TTF Indexes: For a trade to be included in the Index it must occur on a trading day between 08:00 and 17:00 London time, on the trade date. If other delivery dates become liquid then these also will be calculated in addition to the dates above. For the purposes of these Indexes, trading days are every day except Saturday, Sunday, New Years Day, Good Friday, Easter Monday, Christmas Day and Boxing Day.

LEBA NCG Pricing Index: Price Calculation Methodology

Day-ahead Index: The Day-ahead Index is calculated using a volume-based, weighted average of all Day-ahead trades executed in London by contributing brokers between 08:00 and 17:00 hours London time each day. The Index values gas trades for delivery on the business day, or days in the case of weekends, following the deal date (Trade Day). The delivery day is the Index day. In the Index, weekends shall be calculated using a volume-based, weighted average of all weekend trades executed in London by contributing brokers between 08:00 and 17:00 hours London time on the previous business day. In the calculation of the Index, previous business day convention shall apply.

Day-ahead Window Index: The Day-ahead Index is calculated using a volume-based, weighted average of all Day-ahead trades executed in London by contributing brokers between 16:10:00 hours and 16:20:00 hours London time each day. The Index values gas trades for delivery on the day, or days in the case of weekends, following the deal date (Trade Day). The delivery day is the Index day. In the Index, weekends shall be calculated using a volume-based, weighted average of all weekend trades executed in London by contributing brokers between 16:10:00 hours and 16:20:00 hours London time on the previous business day. In the calculation of the Index, previous business day convention shall apply.

Month Ahead Index: The Month Ahead Index is calculated using a volume-based, weighted average of all Month- ahead trades executed in London by contributing brokers between 08:00 hours and 17:00 hours London time each day. The Index values gas trades for delivery within the month following the deal date (Trade Day). The delivery month is the Index month. In the calculation of the Index, previous business day convention shall apply

Trades to be included in the Index: LEBA NCG Index: For a trade to be included in the Index it must occur on a trading day between 08:00 and 17:00 London time, on the trade date. All trades, including Private and Confidential Trades (P&C), will be included in the Index. If other delivery dates become liquid then these also will be calculated in addition to the dates above. For the purposes of these Indexes, trading days are every day except Saturday, Sunday, New Years Day, Good Friday, Easter Monday, Christmas Day and Boxing Day.





LEBA GPI Pricing Index: Price Calculation Methodology

Day-ahead Index: The Day-ahead Index is calculated using a volume-based, weighted average of all Day-ahead trades executed in London by contributing brokers between 08:00hrs and 17:00hrs London time each day. The Index values gas trades for delivery on the day, or days in the case of weekends, following the deal date (Trade Day). The delivery day is the Index day. In the Index, weekends shall be calculated using a volume-based, weighted average of all weekend trades executed in London by contributing brokers between 08:00hrs and 17:00hrs London time on the previous business day. In the calculation of the Index, previous business day convention shall apply.

Day-ahead Window Index: The Day-ahead Index is calculated using a volume-based, weighted average of all Day-ahead trades executed in London by contributing brokers between 16:00:00 hours and 16:10:00 hours London time each day. The Index values gas trades for delivery on the day, or days in the case of weekends, following the deal date (Trade Day). The delivery day is the Index day. In the Index, weekends shall be calculated using a volume-based, weighted average of all weekend trades executed in London by contributing brokers between 16:00:00 hours and 16:10:00 hours London time on the previous business day. In the calculation of the Index, previous business day convention shall apply.

Trades to be included in the Index: LEBA GPI Index: For a trade to be included in the Index it must occur on a trading day between 08:00 and 17:00 London time, on the trade date. All trades, including Private and Confidential Trades (P&C), will be included in the Index. If other delivery dates become liquid then these also will be calculated in addition to the dates above. For the purposes of these Indexes, trading days are every day except Saturday, Sunday, New Years Day, Good Friday, Easter Monday, Christmas Day and Boxing Day.

LEBA CEGH Pricing Index: Price Calculation Methodology

Day-ahead Index: The Day-ahead Index is calculated using a volume-based, weighted average of all Day-ahead trades executed in London by contributing brokers between 08:00hrs and 17:00hrs London time each day. The Index values gas trades for delivery on the day, or days in the case of weekends, following the deal date (Trade Day). The delivery day is the Index day. In the Index, weekends shall be calculated using a volume-based, weighted average of all weekend trades executed in London by contributing brokers between 08:00hrs and 17:00hrs London time on the previous business day. In the calculation of the Index, previous business day convention shall apply.

Day-ahead Window Index: The Day-ahead Index is calculated using a volume-based, weighted average of all Day-ahead trades executed in London by contributing brokers between 16:10:00 hours and 16:20:00 hours London time each day. The Index values gas trades for delivery on the day, or days in the case of weekends, following the deal date (Trade Day). The delivery day is the Index day. In the Index, weekends shall be calculated using a volume-based, weighted average of all weekend trades executed in London by contributing brokers between 16:10:00 hours and 16:20:00 hours London time on the previous business day. In the calculation of the Index, previous business day convention shall apply.





Trades to be included in the Index: LEBA CEGH Index: For a trade to be included in the Index it must occur on a trading day between 08:00 and 17:00 London time, on the trade date. All trades, including Private and Confidential Trades (P&C), will be included in the Index. If other delivery dates become liquid then these also will be calculated in addition to the dates above. For the purposes of these Indexes, trading days are every day except Saturday, Sunday, New Years Day, Good Friday, Easter Monday, Christmas Day and Boxing Day.

LEBA PEG North Pricing Index: Price Calculation Methodology

Day-ahead Index: The Day-ahead Index is calculated using a volume-based, weighted average of all Day-ahead trades executed in London by contributing brokers between 08:00hrs and 17:00hrs London time each day. The Index values gas trades for delivery on the day, or days in the case of weekends, following the deal date (Trade Day). The delivery day is the Index day. In the Index, weekends shall be calculated using a volume-based, weighted average of all weekend trades executed in London by contributing brokers between 08:00hrs and 17:00hrs London time on the previous business day. In the calculation of the Index, previous business day convention shall apply.

Day-ahead Window Index: The Day-ahead Index is calculated using a volume-based, weighted average of all Day-ahead trades executed in London by contributing brokers between 16:10:00 hours and 16:20:00 hours London time each day. The Index values gas trades for delivery on the day, or days in the case of weekends, following the deal date (Trade Day). The delivery day is the Index day. In the Index, weekends shall be calculated using a volume-based, weighted average of all weekend trades executed in London by contributing brokers between 16:10:00 hours and 16:20:00 hours London time on the previous business day. In the calculation of the Index, previous business day convention shall apply.

Trades to be included in the Index: LEBA PEG North Index: For a trade to be included in the Index it must occur on a trading day between 08:00 and 17:00 London time, on the trade date. All trades, including Private and Confidential Trades (P&C), will be included in the Index. If other delivery dates become liquid then these also will be calculated in addition to the dates above. For the purposes of these Indexes, trading days are every day except Saturday, Sunday, New Years Day, Good Friday, Easter Monday, Christmas Day and Boxing Day.

LEBA PEG South Pricing Index: Price Calculation Methodology

Day-ahead Index: The Day-ahead Index is calculated using a volume-based, weighted average of all Day-ahead trades executed in London by contributing brokers between 08:00hrs and 17:00hrs London time each day. The Index values gas trades for delivery on the day, or days in the case of weekends, following the deal date (Trade Day). The delivery day is the Index day. In the Index, weekends shall be calculated using a volume-based, weighted average of all weekend trades executed in London by contributing brokers between 08:00hrs and 17:00hrs London time on the previous business day. In the calculation of the Index, previous business day convention shall apply.





Day-ahead Window Index: The Day-ahead Index is calculated using a volume-based, weighted average of all Day-ahead trades executed in London by contributing brokers between 16:20:00 hours and 16:30:00 hours London time each day. The Index values gas trades for delivery on the day, or days in the case of weekends, following the deal date (Trade Day). The delivery day is the Index day. In the Index, weekends shall be calculated using a volume-based, weighted average of all weekend trades executed in London by contributing brokers between 16:20:00 hours and 16:30:00 hours London time on the previous business day. In the calculation of the Index, previous business day convention shall apply.

Month Ahead Index: The Month Ahead Index is calculated using a volume-based, weighted average of all Month- ahead trades executed in London by contributing brokers between 08:00 hours and 17:00 hours London time each day. The Index values gas trades for delivery within the month following the deal date (Trade Day). The delivery month is the Index month. In the calculation of the Index, previous business day convention shall apply.

Trades to be included in the Index: LEBA PEG South Index: For a trade to be included in the Index it must occur on a trading day between 08:00 and 17:00 London time, on the trade date. If other delivery dates become liquid then these also will be calculated in addition to the dates above. For the purposes of these Indexes, trading days are every day except Saturday, Sunday, New Years Day, Good Friday, Easter Monday, Christmas Day and Boxing Day.

LEBA PSV Pricing Index: Price Calculation Methodology

Day-ahead Index: The Day-ahead Index is calculated using a volume-based, weighted average of all Day-ahead trades executed in London by contributing brokers between 08:00 and 17:00 hours London time each day. The Index values gas trades for delivery on the day, or days in the case of weekends, following the deal date (Trade Day). The delivery day is the Index day. In the Index, weekends shall be calculated using a volume-based, weighted average of all weekend trades executed in London by contributing brokers between 08:00 and 17:00 hours London time on the previous business day. In the calculation of the Index, previous business day convention shall apply.

Day-ahead Window Index: The Day-ahead Index is calculated using a volume-based, weighted average of all Day-ahead trades executed in London by contributing brokers between 16:20:00 hours and 16:30:00 hours London time each day. The Index values gas trades for delivery on the day, or days in the case of weekends, following the deal date (Trade Day). The delivery day is the Index day. In the Index, weekends shall be calculated using a volume-based, weighted average of all weekend trades executed in London by contributing brokers between 16:20:00 hours and 16:30:00 hours London time on the previous business day. In the calculation of the Index, previous business day convention shall apply.

Month Ahead Index: The Month Ahead Index is calculated using a volume-based, weighted average of all Month- ahead trades executed in London by contributing brokers between 08:00 hours and 17:00 hours London time each day. The Index values gas trades for delivery within the month following the deal date (Trade Day). The delivery month is the Index month. In the calculation of the Index, previous business day convention shall apply.





Trades to be included in the Index: LEBA PSV Indexes: For a trade to be included in the Index it must occur on a trading day between 08:00 and 17:00 London time, on the trade date. If other delivery dates become liquid then these also will be calculated in addition to the dates above. For the purposes of these Indexes, trading days are every day except Saturday, Sunday, New Years Day, Good Friday, Easter Monday, Christmas Day and Boxing Day.

Contact

If you require any further information or clarification in respect of transaction reporting please do not hesitate to contact us.

McDonald,

Alex Telephone: +44 (0) 203 207 9740 Email: <u>amcdonald@wmba.org.uk</u>

or

Pamela Telephone: +44 (0) 203 207 9740 Email: Email: <u>compliance@wmba.org.uk</u> Donnison,

Compliance

CEO

pdonnison@wmba.org.uk

Wholesale Markets Brokers' Association/ London Energy Brokers' Association St Clements House 27-28 Clements Lane London EC4N 7AE