

**Master Agreement
for Physical Gas Positions**

– MA PGPs –

between

E.ON Ruhrgas AG, Huttropstrasse 60, 45138 Essen, Germany

– hereinafter referred to as “ERG” –

and

E.ON Energy Trading AG, Holzstrasse 6, 40221 Düsseldorf, Germany

– hereinafter referred to as “EET” –

– ERG and EET collectively referred to as “the Parties” –

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Preamble

WHEREAS, ERG and EET are affiliated companies of the E.ON group. The E.ON group conducts business activities in the entire value chains of the power and gas business that ranges from power generation and gas production to distribution and customer sales.

WHEREAS, EET is a German legal entity and the centralized trading unit of the E.ON group focusing on the European energy and energy-derivatives wholesale trading markets, in particular by holding access to the main European commodity exchanges, broker platforms and other OTC-markets.

WHEREAS, ERG is a German legal entity receiving gas supplies from external counterparties and selling gas to customers.

WHEREAS, the Parties agree that ERG shall sell and purchase Physical Gas Positions to and from EET on the basis of this Master Agreement and Transactions under this Master Agreement (hereinafter referred to as “Master Agreement” and “Transactions”), thus enabling EET to act as the European centralized wholesale energy trading unit of the E.ON group.

WHEREAS, under this Master Agreement EET is both entitled and obliged to purchase and sell Physical Gas Positions from ERG (hereinafter referred to as “PGP”) and ERG is both entitled and obliged to sell and purchase Physical Gas Positions to EET.

WHEREAS, the price for the PGP’s is to be calculated according to the rules which are set out in this Master Agreement.

Terms used in the Master Agreement shall have the meanings set out in this Master Agreement.

Accordingly, the Parties agree as follows:

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Article 1
Scope of Application and Resolution of Conflicts

- 1.1 This Master Agreement applies to Transactions resulting out of this Master Agreement between the Parties. All Transactions are entered into in reliance on the fact that this Master Agreement and all Transactions form a single agreement between the Parties and that the Parties would not otherwise enter into any Transaction. Transactions shall be evidenced in a written Confirmation substantially in the form of the applicable Confirmation sheet from among those attached to this Master Agreement as **Annex 1**.
- 1.2 In the event a provision of this Master Agreement conflicts with a provision of a Transaction, the latter shall prevail.

Article 2
Physical Gas Positions

- 2.1 For the purpose of the optimisation of the ERG portfolio at trading hubs, ERG sells gas quantities to EET and buys gas quantities from EET on a regular basis (Physical Gas Position). **Annex 2.1** defines the product specifications for selling and buying Physical Gas Positions which shall be governed by this Master Agreement.
- 2.2 ERG may request and EET may offer to buy or sell Physical Gas Position according to the rules set out in **Annex 2**. Each Transaction will be confirmed by a Confirmation as set out in **Annex 1**.

Article 3
Determination of Transaction Price and Transaction Date

- 3.1 The Transaction Price used for each Physical Gas Position is calculated at the time of concluding a Transaction for the different products according to **Annex 3**. The Maximum Transaction Quantity during one Trading Day to be priced, unless the Parties agree otherwise, is set out in **Annex 3.6**.

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3.2 The Transaction Price contains some or all of the following elements of remuneration (Price Elements):

- (1) A Contract Price which is payable based on the quantities of gas delivered at the relevant Delivery Point as specified in a Transaction,
- (2) Recalculation Payments as defined in **Annex 4**,
- (3) A Reconciliation Compensation Payment as defined in **Annex 4**,
- (4) A Remuneration for Optimisation Activities as defined in the respective sections of **Annex 3**.
- (5) A Standing Charge or a Commodity Price as defined in **Annex 3**.

Article 4

Optimisation Activities

EET shall perform optimisation activities in selling gas to ERG and buying gas from ERG. In particular, EET is responsible for the planning of scheduling and dispatching of the gas deliveries under a Transaction. With view on this, EET takes into consideration all regulatory frameworks and technical features of the market, which determine and affect the efficiency of each Transaction. Moreover, EET will be responsible for the optimum use of all flexibilities under a Transaction.

The performance of the following activities is essentially necessary in order to realize the prices described in **Annex 3** in the trading markets. A successful risk management and an ongoing Optimisation of commodity positions can only be reached, if the activities described below are performed by EET to ERG:

- (a) Optimisation of volume and timing of purchasing gas;
- (b) Scheduling: Optimisation of hourly schedules of each Transaction;
- (c) Dispatching: continuous intra-day monitoring of gas supply and execution of necessary adjustments;
- (d) Nomination of schedules to ERG;
- (e) Market analyses and forecasting;
- (f) Services for calculation and supplying of the data basis to ERG for invoicing purposes;

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Article 5

Nomination

5.1. Day Ahead Nomination (D-1)

Each Party, where applicable, shall nominate the respective net quantities splitted to the used shipperpairs for each day D not later than D-1, 13:00. Each Party shall be responsible for nominations to its respective transmission network operator under such transmission network operator regulations.

5.2 Within Day Nomination (D)

Each Party shall have the right to renominate its nomination within the day at the latest one hour before the respective transmission network operator requirements. In the event a Party does not nominate to the other Party as set out above the last nomination made by such Party to the other Party shall be deemed to be nominated.

All Nominations shall be done by EDIG@S.

Article 6

Invoicing and Payments

6.1 Any prices, fees, costs and other charges invoiced in accordance with this Master Agreement and/or any Transaction hereunder are net amounts and subject to any applicable taxes and charges.

6.2 All prices and fees to be remunerated and costs and charges to be reimbursed will be invoiced on a monthly basis, unless otherwise set out in a Confirmation, regarding the previous month. Invoices regarding the Delivery Month shall be issued not later than the 10th Working Day after the end of the Delivery Month. The payment by the respective Party shall be due on the 10th Working Day following the receipt of the invoice. Overdue payments shall accrue interest from, and including, the due date to, but excluding, the date of payment, at an interest rate corresponding to the German Civil Code, § 288 BGB.

6.3 EET is responsible for calculating all Remuneration Payments with the exception of Article 3.2(1) and for issuing specifications of such Remuneration Payments. The calculations and specifications of the Remuneration Payments have to be provided to ERG by the 5th Working Day after the end of each Delivery Month at the latest.

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- 6.4 The Parties shall provide each other with all relevant data for the calculation of such Remuneration Payments.

Article 7

Recalculation and Reconciliation of Transaction Prices

The principles set out in **Annex 4** shall apply.

Article 8

Information Exchange and Documentation

- 8.1 The Parties shall undertake to perform all reasonable assistance to enable each other to fulfil their obligations under this Master Agreement. In particular, each Party shall submit all data (be it as hard copy or in electronic format) and any explanations relating to these data to the other Party required for the performance of the obligations under this Master Agreement.
- 8.2 The Parties shall be obliged to properly document the performance of their Transactions executed under this Master Agreement. The documentation must be prepared in such a way that an expert third-party could gain insight into the calculation of the remuneration of the transactions executed under this Master Agreement. This documentation shall be kept for at least ten (10) years after the end of each settlement year. At the request of a Party the other Party is obliged to make available the respective documentation to the requesting Party.
- 8.3 Any Party that wants to object to any calculation or specification provided by the other Party shall do so in writing within five (5) Working Days upon receipt of such calculation or specification. Failure to do so shall be deemed to be an acceptance of such calculation or specification.
- 8.4 The Parties shall exchange in writing a list of contact persons responsible for the execution of this Master Agreement, Annex 8 and keep this list up to date.

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Article 9
VAT, Customs and other Tax Issues

- 9.1 All payments under this Master Agreement are exclusive of VAT.
- 9.2 The Parties are dependent companies of E.ON AG as the controlling company according to Sec. 2 para. 2 no. 2 Umsatzsteuergesetz ("German VAT Tax Group") and shall not invoice the other Party with VAT.
- 9.3 In the event that ERG or EET withdraws from the German VAT Tax Group, EET shall pay and invoice to ERG and ERG shall pay and invoice to EET an amount equal to the VAT at the applicable VAT rate.
- 9.4 All payments referred to under this Master Agreement are exclusive of any customs and excise duties. If deliveries under this Master Agreement are subject to customs and excise duties each ERG or EET shall state these customs and excise duties separately on the invoice and the other Party shall pay such amounts.

Article 10
Miscellaneous

- 10.1 EET may delegate the execution of the tasks imposed on it under this Master Agreement - either partly or completely - to other companies of the E.ON group, ERG included. In such event, EET is obliged to inform ERG of such delegation. The execution of the tasks cannot be delegated by EET to another company of the E.ON group without the prior agreement about the terms and conditions of the delegation between EET and the other company.
- 10.2 Either Party shall be entitled to assign its rights and/or transfer its obligations under this Master Agreement to an E.ON group company without the prior written consent of the other Party. Neither Party shall be entitled to assign its rights and/or transfer its obligations under this Master Agreement to a third party without the prior written consent of the other Party.

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Article 11

Legal Effect and Termination

- 11.1 The term of this Agreement shall start from the Effective Date (the date the spin-off is registered with the commercial register where ERG has its registered seat) till 31 December 2010. This Agreement shall be automatically renewed for another year, if not terminated by the Parties according to Art. 11.2.
- 11.2 Each Party shall be entitled to terminate this Agreement with the termination date as at 31 December of each calendar year by providing the other Party with a 12-month-prior written notice of termination. In accordance with Article 11.1, a first time termination of this Agreement shall only be admissible as at 31. December 2010.
- 11.3 Notwithstanding Article 11.4 in the event of E.ON AG either owning – directly or indirectly – 50% or less of the shares representing the equity capital of any Party or otherwise losing control over any Party, both the latter Party and its respective counterparty shall each be entitled to terminate this Master Agreement with immediate effect.
- 11.4 No such termination as mentioned in 11.2 and 11.3 shall have retroactive effect on those rights and obligations arising under this Master Agreement which was created or existing prior to the termination becoming effective.
- 11.5 For Transactions prior to the Effective Date reference is made to **Annex 11.5**.

Article 12

Form and Modification of this Agreement

- 12.1 This Master Agreement was prepared in writing in two originals, one for each Party. Any amendment of this Master Agreement, including this provision, shall only be considered as valid and binding on the Parties if executed in writing by the Parties.
- 12.2 Article 12.1 also applies to amendments and supplements of the **Annexes** unless otherwise specified.
- 12.3 In case of significant changes of the economic circumstances having material influence on the commercial basis of this Master Agreement, the Parties shall mutually agree upon any necessary amendments or modifications of this Master Agreement to properly reflect such changes.

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Article 13

Applicable Law

This Master Agreement shall be construed and governed by the laws of Germany, excluding any application of the “United Nations Convention on Contracts for the International Sale of Goods of 11 April 1980”.

Article 14

Confidentiality

- 14.1 During the term of this Master Agreement and at any time after its expiration, the Parties shall preserve in strict confidence any information exchanged – be it in writing, recorded in any other manner or in oral form – between the Parties in course of the negotiations and performance of this Master Agreement (hereinafter referred to as the “Confidential Information”). Confidential Information shall include, but is not limited to technical, financial, commercial, marketing, production, operating information data regarding the Parties or their customers, trading and co-operation partners.
- 14.2 Confidential information, however, shall not include information which
- (a) is disclosed with the two Parties’ prior written consent;
 - (b) Is disclosed by a Party to its directors, employees, affiliates, agents, professional advisors, bank or other financing institution or rating agency;
 - (c) Is disclosed to comply with an applicable law, regulation, or rule of any exchange, system operator or regulatory body, or in connection with any court or regulatory proceeding; provided that all Parties shall, to the extent practicable and permissible under such law, regulation, or rule, use reasonable efforts to prevent or limit the disclosure and to give the other Parties prompt notice of it; or
 - (d) is disclosed in or lawfully comes into public domain other than by a breach of this confidentiality obligation.

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Article 15
Mediation / Arbitration Clause

- 15.1 In cases of disputes resulting from this Master Agreement, the Parties shall first attempt to reach a settlement through negotiations and if such negotiations fail to settle the dispute refer the dispute to the VP Commodity Portfolio Optimisation of E.ON AG or the successor organisational unit for mediation. If a settlement still cannot be reached the dispute shall be referred to the SVP Trading & Optimisation of E.ON AG or the successor organisational unit for mediation. As a final instance, the COO of E.ON AG shall settle the dispute with binding effect for the Parties.
- 15.2 The Parties do not intend that any third party shall have any rights under or be able to enforce this Master Agreement and the Parties exclude to the extent permitted under applicable law any such third party rights that might otherwise be implied.

Article 16
Severability Clause

The invalidity or unenforceability of any provision of this Master Agreement shall not affect its overall validity. Instead of the invalid or unenforceable provision, such a provision shall come into effect which comes closest to the economic objective pursued by the Parties with the invalid or unenforceable provision. The same applies to any gaps in this Master Agreement.

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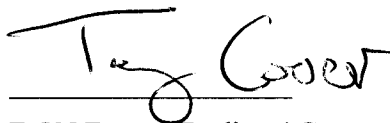
Executed by the duly authorised representatives of each Party:

Essen, 30 June 2008



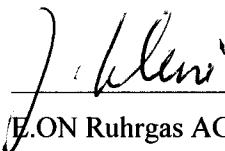
E.ON Ruhrgas AG
Dr. Bernhard Reutersberg
Chairman of the Board

Düsseldorf, 30 June 2008



E.ON Energy Trading AG
Dr. Anthony Cocker
Chairman of the Board

Essen, 30 June 2008



E.ON Ruhrgas AG
Dr. Jochen Weise
Member of the Board

Düsseldorf, 30 June 2008



E.ON Energy Trading AG
Gareth Griffiths
Member of the Board

Annex “Definitions”

Ask Price	A price offered by a trader selling into the market.
BAFA	Bundesamt für Wirtschaft und Ausfuhrkontrolle
Baumgarten Hub	The Gas hub located in Baumgarten, Austria, operated by Central European Gas Hub GmbH.
BEB-VHP-H	The virtual trading point in the H-Gas transportation system operated by BEB Transport und Speicher Service GmbH.
BEB-VHP-L	The virtual trading point in the L-Gas transportation system operated by BEB Transport und Speicher Service GmbH.
Bid Price	A price offered by a trader buying in the market.
Call Option	A financial contract between two parties, the buyer and the seller (writer) of the Option. The buyer of the Option has the right, but not the obligation to buy an agreed quantity of a particular commodity or financial instrument (the underlying instrument) from the seller of the Option at a certain time (the expiration date) for a certain price (the strike price). The seller is obligated to sell the commodity or financial instrument if the buyer exercises its right.
Commodity Price	As defined in Annex 3.2.3
Confidential Information	As defined in Article 14.
Contract Price	The price (in p/th or €/MWh, as appropriate) paid by EET to ERG for the actual quantities of Gas purchased from ERG as defined a Confirmation.
Contract Year	A period commencing on (and including) the Day of 1 October and ending on (and including) the Day of the immediately following 30 September.
Day	A period starting at 06:00 on one day and ending at 05:59 on the next day if not otherwise defined in a Confirmation.
Dedicated Capacity	As defined in Annex 3.1.4
Delivery Month	A month in which Gas is to be delivered under a Transaction.
Delivery Period	As agreed in each Transaction.
Delivery Point	Delivery Points are all Delivery Points defined in this Master Agreement and all Delivery Points otherwise agreed between the Parties, e.g. in an Annex or Transaction.
Delivery Year	A Contract Year in which Gas is to be delivered under a Transaction.
E.ON group	E.ON AG and all affiliated companies according to § 15 AktG.
EGT-VHP-H	The virtual trading point in the H-Gas transportation system operated by E.ON Gastransport AG & Co. KG.

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EGT-VHP-L	The virtual trading point in the L-Gas transportation system operated by E.ON Gastransport AG & Co. KG.
Emden	The flange between the GTS System and Emden (Gassco) located in the Emden area.
Endur	The EET Trading System (Endur) used by ERG and EET for the capture of Market Prices.
External Counterparty	Any party other than ERG and EET having contracted or contracting in the future with ERG and / or EET.
Eynatten	The flange between the Distrigaz System and the EGT System (H-Gas) located at Eynatten (Belgian/German border).
Forward	A contract between two parties to buy or sell a commodity at a pre-agreed future point in time.
Forward Prices	The Gas Forward Price and the forward prices of the Tradable Commodity Indices and Proxy Tradable Commodity Indices.
FX	Foreign currency exchange rate.
Gas	Any hydrocarbons or mixture of hydrocarbons and other gases consisting primarily of methane which at a temperature of 15 °C and atmospheric pressure are or is predominantly in the gaseous state.
Gas Day	A day in which gas is to be delivered under a Transaction.
Gas Forward Price	The Forward Price for Gas for the relevant period and market.
GRTgaz System	The gas transportation system located in France and operated by GRTgaz.
GTS System	The Gas transportation system located in the Netherlands and operated by GTS (Gas Transport Services).
Liquidity	The volume of a commodity one can trade per Trading Day without influencing the Market Price.
Marginal Transportation Costs	As defined in Annex 3.2.5
Market Closing Price	The respective price of a commodity when the market closes.
Market Price	Respective Bid- and Ask- prices for a commodity.
Master Agreement	All provisions and regulations of this Master Agreement including all its Annexes .
Maximum Daily Quantity	As defined in Article 3.1.3.(a)
Maximum Transaction Quantity	As defined in Annex 3.6
Medelsheim	The flange between the GRTgaz System and the EGT / MEGAL System located near Medelsheim and Obergailbach (French/German border).

Month	A period from (and including) the first Day of any calendar month to (and including) the last Day of the calendar month.
Monthly Shape	A delivery schedule for a commodity with fixed but different monthly quantities.
Monthly Shape Forward Curve	As defined in Annex 3.7
MTP Period	The current Contract Year (Y) and the two (2) immediately following Contract Years (Y+1 and Y+2).
NBP	The National Balancing Point which is a virtual trading point in the U.K.
Ontras-VHP	The virtual trading point in the Gas transportation system operated by ONTRAS - VNG Gastransport GmbH.
OTC	Over-the-counter markets (bilateral trades).
Oude Statenzijl	The flange between the GTS System and the EGT System (H-Gas) located at Oude Statenzijl (Dutch/German border).
Party	As defined on the cover page.
Price Element	As defined in Art. 3.2
Pricing Month	A Month in which Gas deliveries are being priced.
Pricing Period	As defined in Annex 3.6
Pricing Year	A Contract Year in which Gas deliveries are being priced.
PSV	The Punto di Scambio Virtuale virtual trading point in Italy.
Put Option	A financial contract between two parties, the seller (writer) and the buyer of the option. The Put Option allows the buyer the right but not the obligation to sell a commodity or financial instrument (the underlying instrument) to the writer (seller) of the Option at a certain time for a certain price (the strike price). The writer (seller) has the obligation to purchase the underlying asset at that strike price, if the buyer exercises the Option.
Recalculation Payment	As defined in Annex 4.1
Reconciliation Compensation Payment	As defined in Annex 4.2
Seller Default	As defined in Annex 4.2.1
Shadow Nomination	As defined in Annex 4.2.2 b)
Spot	A contract between two parties to buy or sell a commodity and settle the Transaction within short notice.
Spread	The forward price for Gas minus the Contract Price minus the Marginal Transportation Cost, all in respect of a Delivery Month M ($FWP_M - CP_M - MTC_M$).
Standing Charge	As defined in Annex 3 , the equivalent to the German "Grundpreis".

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Total Call Quantity	As defined in Annex 3.3.9
Total Put Quantity	As defined in Annex 3.3.10
Trading Day	A day on which Gas is traded in the relevant market and a price is published by an agreed source.
Transaction Parameters	As set out in each Confirmation sheet according to Annex 3.1.3
Transaction Price	As defined in Article 3.
TTF	The Title Transfer Facility which is a virtual trading point in the GTS system.
Unshaped Gas Forward Price	As defined in Annex 3.7.
Working Day	A day (other than a Saturday or a Sunday) which is not a public holiday in Northrhine-Westfalia.
Zeebrugge	The point where the flanges connect the Interconnector U.K. to the Belgian transmission system which is operated by Fluxys in Zeebrugge, Belgium.

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Annex 1 Confirmation template

Confirmation Sheet / Offer Sheet under the Master Agreement Physical Gas Position

All terms and conditions of the Master Agreement Physical Gas Positions dated 30 June 2008 shall apply to this Confirmation Sheet/Offer Sheet

Fixed Quantity

Offer Sheet	X
Confirmation Sheet	

Status

New	X
Renalculation	
Termination	

Effective Date

Transaction data

Transaction No.	
Transaction Date	
Product	
Seller	ERG
Buyer	EET
Expiry of Transaction	
Delivery Period (Start)	
Delivery Period (End)	
Unit	Mio kWh

Pricing Period

Liquidity Matrix No. / Date	
Max. Transaction Quantity per day	Mio kWh
Transaction Quantity per day (min)	Mio kWh
Pricing Period (Start)	
Pricing Period (End)	

Delivery Points

	Name	Remark
Delivery Point 1	n/a	
Delivery Point 2	n/a	

Contracted quantities and optimization constraints at different delivery points

	Unit	Total	n/a	n/a	Remark
Daily Quantities (max)	Mio kWh				
Daily Quantities (min)	Mio kWh				
Transaction Quantities (max)	Mio kWh				
Transaction Quantities (min)	Mio kWh				-
Monthly profile as set out below					

Maintenance

Maintenance Start	Date
Maintenance End	Date

Dedicated transportation capacity

Unit	By market/OTG Entry	OTG Entry	OTG Entry	n/a	n/a	Remark
Capacity Classification	X					
Capacity change						
Commodity Charge						

Forward curve to be used for pricings of the transactions

Delivery Point	End of curve	Reference to documentation
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Delivery Point 1

Delivery Point 2

Monthly profile

Month	Unit	Total	n/a	n/a
		min	max	min
Jan. 00	Mio kWh			
Feb. 00	Mio kWh			
Mrz. 00	Mio kWh			
Apr. 00	Mio kWh			
Mai. 00	Mio kWh			
Jun. 00	Mio kWh			
Jul. 00	Mio kWh			
Aug. 00	Mio kWh			
Sep. 00	Mio kWh			
Okt. 00	Mio kWh			
Nov. 00	Mio kWh			
Dez. 00	Mio kWh			
Jan. 01	Mio kWh			
Feb. 01	Mio kWh			
Mrz. 01	Mio kWh			
Apr. 01	Mio kWh			
Mai. 01	Mio kWh			
Jun. 01	Mio kWh			
Jul. 01	Mio kWh			
Aug. 01	Mio kWh			
Sep. 01	Mio kWh			
Okt. 01	Mio kWh			
Nov. 01	Mio kWh			
Dez. 01	Mio kWh			
Jan. 02	Mio kWh			
Feb. 02	Mio kWh			
Mrz. 02	Mio kWh			
Apr. 02	Mio kWh			
Mai. 02	Mio kWh			
Jun. 02	Mio kWh			
Jul. 02	Mio kWh			
Aug. 02	Mio kWh			
Sep. 02	Mio kWh			
Okt. 02	Mio kWh			

Nov. 02	Nov. 02
Dez. 02	Dez. 02
Additional Information	

Estimated Transaction Volume
(Mio €)

Signatures E.ON Ruhrgas

Signatures E.ON

Essen,	Essen,	Düsseldorf,	Düsseldorf,
Signature	Signature	Signature	Signature
Name of Signatory	Name of Signatory	Name of Signatory	Name of Signatory
Title of Signatory	Title of Signatory	Title of Signatory	Title of Signatory

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Confirmation Sheet / Offer Sheet under the Master Agreement Physical Gas Position

All terms and conditions of the Master Agreement Physical Gas Positions dated 30 June 2008 shall apply to this Confirmation Sheet/Offer Sheet

Flexible and Floating Price Quantities

Offer Sheet	X
Confirmation Sheet	

Status

Effective Date

New	X
Recalculation	
Termination	

Transaction data

Transaction No.	
Transaction Date	
Product	
Seller	ERG
Buyer	EET
Expiry of Transaction	
Delivery Period (Start)	
Delivery Period (End)	
Unit	Mio kWh

Pricing Period

Liquidity Matrix No. / Date	
Max. Transaction Quantity per day	Mio kWh
Transaction Quantity per day (min)	Mio kWh
Pricing Period (Start)	
Pricing Period (End)	

Delivery Points

	Name	Remark
Delivery Point 1	n/a	
Delivery Point 2	n/a	

Contracted quantities and optimization constraints at different delivery points

	Unit	Total	n/a	n/a	Remark
Daily Quantities (max)	Mio kWh				
Daily Quantities (min)	Mio kWh				
Transaction Quantities (max)	Mio kWh				
Transaction Quantities (min)	Mio kWh				
Monthly profile as set out below					

Maintenance

Maintenance	Days
Maintenance Start	Date
Maintenance End	Date

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Dedicated transportation capacity

	Unit	Bynatten/Z-Hub	QTS Entry Oude	QTS Entry Binde	n/a	n/a	Remark
Capacity of transportation		X					
Capacity of storage							
Commodity Charge							

Forward curve to be used for pricings of the transactions

Delivery Point	Endur Curve	Reference to documentation
Delivery Point 1		
Delivery Point 2		

Contract price formula

Commodity indices to be specified

Index in Formula above	Endur Curve	Reference to documentation
Index1		
Index2		
Index3		
Index4		
Index5		

Monthly profile

Month	Unit	Total min	max	n/a min	max	n/a min	max
Jan. 00	Mio kWh						
Feb. 00	Mio kWh						
Mrz. 00	Mio kWh						
Apr. 00	Mio kWh						
Mai. 00	Mio kWh						
Jun. 00	Mio kWh						
Jul. 00	Mio kWh						
Aug. 00	Mio kWh						
Sep. 00	Mio kWh						
Okt. 00	Mio kWh						
Nov. 00	Mio kWh						
Dez. 00	Mio kWh						
Jan. 01	Mio kWh						
Feb. 01	Mio kWh						
Mrz. 01	Mio kWh						
Apr. 01	Mio kWh						
Mai. 01	Mio kWh						
Jun. 01	Mio kWh						
Jul. 01	Mio kWh						
Aug. 01	Mio kWh						

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Sep. 01	Mio kWh
Oct. 01	Mio kWh
Nov. 01	Mio kWh
Dec. 01	Mio kWh
Jan. 02	Mio kWh
Feb. 02	Mio kWh
März 02	Mio kWh
Apr. 02	Mio kWh
Mai 02	Mio kWh
Juni 02	Mio kWh
Juli 02	Mio kWh
Aug. 02	Mio kWh
Sep. 02	Mio kWh
Oct. 02	Mio kWh
Nov. 02	Mio kWh
Dec. 02	Mio kWh

Additional Information

Estimated Transaction Volume
(Mio. €)

Signatures E.ON Ruhrgas

Signatures EET

Essen,

Essen,

Düsseldorf,

Düsseldorf,

Signature

Signature

Signature

Signature

Name of Signatory

Name of Signatory

Name of Signatory

Name of Signatory

Title of Signatory

Title of Signatory

Title of Signatory

Title of Signatory

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Confirmation Sheet / Offer Sheet under the Master Agreement Physical Gas Position

All terms and conditions of the Master Agreement Physical Gas Positions dated 30 June 2008 shall apply to this Confirmation Sheet/Offer Sheet

Fixed Price Order

Offer Sheet	X
Confirmation Sheet	

Status	Effective Date
New	X
Reconciliation	
Termination	

Transaction data

Transaction No.	
Transaction Date	
Product	
Seller	ERG
Buyer	EET
Expiry of Transaction	
Delivery Period (Start)	
Delivery Period (End)	
Unit	Mio kWh

Pricing Period

Liquidity Matrix No. / Date	
Max. Transaction Quantity per day	Mio kWh
Transaction Quantity per day (min)	Mio kWh
Pricing Period (Start)	
Pricing Period (End)	

Delivery Points

	Name	Remark
Delivery Point 1	n/a	
Delivery Point 2	n/a	

Contracted quantities and optimization constraints at different delivery points

	Unit	Total	n/a	n/a	Remark
Daily Quantities (max)	Mio kWh				
Daily Quantities (min)	Mio kWh				
Transaction Quantities (max)	Mio kWh				
Transaction Quantities (min)	Mio kWh				
Monthly profile as set out below					

Maintenance

Maintenance	Days	
Maintenance Start	Date	
Maintenance End	Date	

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Dedicated transportation capacity

Unit	System/Z-Hub	OTS Entry Oude	OTS Entry Sinden	n/a	n/a	Remark
Capacity/Of reservation	X					
Capacity change						
Commodity/Change						

Forward curve to be used for pricings of the transactions

Delivery Point	Hour Curve	Reference to documentation
Delivery Point 1		
Delivery Point 2		

Offer price

Delivery point	Unit	Price
Delivery Point 1		
Delivery Point 2		

Monthly profile

Month	Unit	Total	n/a	n/a
		max	max	max
Jan. 00	Mio kWh			
Feb. 00	Mio kWh			
Mrz. 00	Mio kWh			
Apr. 00	Mio kWh			
Mal. 00	Mio kWh			
Jun. 00	Mio kWh			
Jul. 00	Mio kWh			
Aug. 00	Mio kWh			
Sep. 00	Mio kWh			
Okt. 00	Mio kWh			
Nov. 00	Mio kWh			
Dez. 00	Mio kWh			
Jan. 01	Mio kWh			
Feb. 01	Mio kWh			
Mrz. 01	Mio kWh			
Apr. 01	Mio kWh			
Mal. 01	Mio kWh			
Jun. 01	Mio kWh			
Jul. 01	Mio kWh			
Aug. 01	Mio kWh			
Sep. 01	Mio kWh			
Okt. 01	Mio kWh			
Nov. 01	Mio kWh			
Dez. 01	Mio kWh			
Jan. 02	Mio kWh			
Feb. 02	Mio kWh			
Mrz. 02	Mio kWh			
Apr. 02	Mio kWh			
Mal. 02	Mio kWh			
Jun. 02	Mio kWh			
Jul. 02	Mio kWh			
Aug. 02	Mio kWh			
Sep. 02	Mio kWh			
Okt. 02	Mio kWh			
Nov. 02	Mio kWh			
Dez. 02	Mio kWh			

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Additional Information

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**Estimated Transaction Volume
(Mill. €)****Signature E.ON Ruhrgas****Signature E.ON**

Essen,

Essen,

Düsseldorf,

Düsseldorf,

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Signature

Signature

Signature

Signature

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Name of Signatory

Name of Signatory

Name of Signatory

Name of Signatory

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Title of Signatory

Title of Signatory

Title of Signatory

Title of Signatory

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Confirmation Sheet / Offer Sheet under the Master Agreement Physical Gas Position

All terms and conditions of the Master Agreement Physical Gas Positions dated 30 June 2008 shall apply to this Confirmation Sheet/Offer Sheet

Spot Forward Order

Offer Sheet	X
Confirmation Sheet	

Status	Effective Date
New	X
Recalculation	
Termination	

Transaction data

Transaction No.		
Transaction Date		
Product		
Seller	ERG	EET
Buyer	EET	ERG
Expiry of Transaction		
Delivery Period (Start)		
Delivery Period (End)		
Unit	Mio kWh	

Pricing Period

Liquidity Matrix No. / Date	
Max. Transaction Quantity per day	Mio kWh
Transaction Quantity per day (min)	Mio kWh
Pricing Period (Start)	
Pricing Period (End)	

Delivery Points

	Name	Remark
Delivery Point 1	n/a	
Delivery Point 2	n/a	

Contracted quantities and optimization constraints at different delivery points

	Unit	Total	n/a	n/a	Remark
Daily Quantities (max)	Mio kWh				
Daily Quantities (min)	Mio kWh				
Transaction Quantities (max)	Mio kWh				
Transaction Quantities (min)	Mio kWh				
Monthly profile as set out below					

Maintenance

Maintenance	Days	
Maintenance Start	Date	
Maintenance End	Date	

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Dedicated transportation capacity

Unit	Origin/Hub	GTS Entry Code	GTS Entry Amount	n/a	n/a	Remark
Capacity Classification	X					
Capacity change						
Commodity Change						

Forward curve to be used for pricings of the transactions

Delivery point	Forward Curve	Reference to documentation
Delivery Point 1		
Delivery Point 2		

Offer price

Delivery point	Unit	Price
Delivery Point 1		
Delivery Point 2		

Monthly profile

Month	Unit	Total	n/a	n/a
		max	max	max
Jan. 00	Mio kWh			
Feb. 00	Mio kWh			
Mrz. 00	Mio kWh			
Apr. 00	Mio kWh			
Mai. 00	Mio kWh			
Jun. 00	Mio kWh			
Jul. 00	Mio kWh			
Aug. 00	Mio kWh			
Sep. 00	Mio kWh			
Okt. 00	Mio kWh			
Nov. 00	Mio kWh			
Dez. 00	Mio kWh			
Jan. 01	Mio kWh			
Feb. 01	Mio kWh			
Mrz. 01	Mio kWh			
Apr. 01	Mio kWh			
Mai. 01	Mio kWh			
Jun. 01	Mio kWh			
Jul. 01	Mio kWh			
Aug. 01	Mio kWh			
Sep. 01	Mio kWh			
Okt. 01	Mio kWh			
Nov. 01	Mio kWh			
Dez. 01	Mio kWh			
Jan. 02	Mio kWh			
Feb. 02	Mio kWh			
Mrz. 02	Mio kWh			
Apr. 02	Mio kWh			
Mai. 02	Mio kWh			
Jun. 02	Mio kWh			
Jul. 02	Mio kWh			
Aug. 02	Mio kWh			
Sep. 02	Mio kWh			
Okt. 02	Mio kWh			
Nov. 02	Mio kWh			
Dez. 02	Mio kWh			

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Additional Information

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**Estimated Transaction
Volume (Mio. €)****Signatures E.ON Ruhrgas****Signatures B&T**

Essen,

Essen,

Düsseldorf,

Düsseldorf,

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Signature**Signature****Signature****Signature**

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Name of Signatory**Name of Signatory****Name of Signatory****Name of Signatory**

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Title of Signatory**Title of Signatory****Title of Signatory****Title of Signatory**

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Annex 2 Defined Products and Transactions

A 2.1 List of Products

A.2.1.1 This **Annex 2.1.1** defines the products sold and bought under the Master Agreement.

These products are:

- (a) Fixed Quantity
- (b) Flexible or Floating Price Quantities
- (c) Fixed Price Order
- (d) Spot Forward Order

A.2.1.2 Possible Delivery Points

- (a) Oude, Emden
- (b) Eynatten
- (c) EGT VHP-H, EGT VHP-L
- (d) Medelsheim
- (e) BEB VHP-H, BEB VHP-L, Ontras VHP
- (f) Baumgarten Hub
- (g) PSV

or as otherwise agreed between the Parties in a Transaction.

A.2.1.3 The products shall be defined according to the criteria Buyer and Seller, Delivery Points, Delivery Periods, Available Flexibility and Pricing Mechanism, Max Quantity.

A.2.1.4 Fixed Quantity

- (a) Definition: Selling and buying of Gas quantities at the trading hubs.
- (b) Buyer: ERG and EET
- (c) Seller: EET and ERG
- (d) Delivery Points: All as defined in A2.1.2 (a) to (c)
- (e) Delivery Periods: M+1 and longer.

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- (f) Available Flexibility: Monthly fixed quantities.
- (g) Pricing Mechanism: As defined in A3.2.
- (h) Maximum Daily Transaction Quantity: Quantity for the respective product as notified by EET under the rules set out by A3.6.

A.2.1.5 Flexible or Floating Price Quantities

- (a) Definition: Sell flexible Gas volumes out of the ERG portfolio to EET.
- (b) Buyer: EET
- (c) Seller: ERG
- (d) Delivery Points: All as defined in A.2.1.2 (a)-(b)
- (e) Delivery Periods: M+1 and longer.
- (f) Available Flexibility: Full Flexibility
- (g) Pricing Mechanism: As defined in A.3.3.
- (h) Max Quantity: Quantity for the respective product as notified by EET under the rules set out by A.3.6.

A.2.1.6. Fixed Price Order

- (a) Definition: Fixed Price Order means an order placed by ERG to EET at a specified Delivery Point for buying or selling a defined maximum quantity at a specified Fixed Price
- (b) Buyer: ERG and EET
- (c) Seller: EET and ERG
- (d) Delivery Points: All as defined in A2.1.2.
- (e) Delivery Periods: All
- (f) Available Flexibility: No Flexibility
- (g) Pricing Mechanism: As defined in A.3.4.
- (h) Maximum Quantity: Defined by ERG

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A.2.1.7 Spot - Forward Order

- (a) Definition: Volume neutral buying and selling of Gas below or above an order price in order to realize Spot vs. Spot and/or Spot vs. Forward arbitrage.
- (b) Buyer: ERG and EET
- (c) Seller: EET and ERG
- (d) Delivery Points: All as defined in A.2.1.2.
- (e) Delivery Periods: All
- (f) Available Flexibility: No Flexibility
- (g) Pricing mechanism: As defined in A.3.5.
- (h) Maximum Quantity: As agreed between the Parties.

A.2.2 Conclusion of a Transaction

A.2.2.1 In case ERG wants to enter into a Transaction, ERG shall notify EET of this according to the following:

- (a) Fixed Price Orders and Spot-Forward Orders shall be notified at latest within the Trading Day at which the Transaction shall be concluded and can only be revised once during a Trading Day.
- (b) Fixed Quantities which include a Monthly Shape shall be notified at latest five (5) Trading Days before the Transaction day. Fixed Quantities which do not include a Monthly Shape shall be notified one Trading Day before the Transaction Day.
- (c) Transaction of Flexible or Floating Price Quantities shall only be concluded at the first Trading Day of a Month. ERG shall notify EET latest at the fifth (5) day of the Month before the planned Transaction about the specifications of such product.

A.2.2.2 The conclusion of a Transaction shall be as follows:

- (a) Unless otherwise agreed between the Parties, Transactions may be concluded in any form of communication (whether in writing, verbally, through an electronic trading platform or otherwise) and shall be legally binding and enforceable starting at that point in time the terms of such Transactions are concluded. For the avoidance of doubt, ERG may send an Offer substantially in the form of the Offer Sheet as attached

in **Annex 1**. If not specified in the Offer, such Offer shall expire automatically within three (3) Trading Days if EET does not respond to such an Offer.

- (b) In case of any dispute about the stipulated terms and conditions of a verbally concluded Transaction the tape recording shall be used, and accepted as evidence, by the Parties in order to resolve the issue.
- (c) In case of any dispute about the stipulated terms and conditions of an electronic Transaction the data saved and made available to the Parties by the provider of the electronic trading platform shall be used, and accepted as evidence, by the Parties in order to resolve the issue.

A.2.2.3 For the purposes of A.2.2 the Parties hereby consent to the recording of telephone conversation(s) in respect of all verbally concluded Transactions as well as to the saving of data in respect of all Transactions concluded through an electronic trading platform. Any Party waives any further notice of such recording and saving and acknowledges that it has obtained all necessary consents of its officers and employees to such recording and saving.

A.2.2.4 In the event of any inconsistency between the tape recordings and the respective Confirmation or the electronic data and the respective Confirmation, the tape recordings or the electronic data shall prevail unless a written Confirmation is signed by both Parties where the latter shall prevail.

A.2.2.5 Confirmations shall be handled as follows:

In the event that a Transaction is not concluded in written form, both Parties shall confirm, or have confirmed, within three (3) Trading Days in writing their understanding of the agreed terms of the Transaction (each such written confirmation constituting a "Confirmation"). A Confirmation shall not constitute a requirement for a legally valid Transaction. A Confirmation shall contain the information stipulated in, and shall be substantially in the form of the applicable agreed Confirmation Sheet from among those attached to this Agreement as **Annex 1**.

A.2.2.6 Objections to Confirmations shall be handled as follows:

If a Party receives a Confirmation, it shall review the terms of such Confirmation and confirm agreement thereto within three (3) Trading Days or, if the terms of such Confirmation differ from its understanding of the terms of the underlying Transaction notify the other Party of any inconsistency within three (3) Trading Days. Failure to respond within such period shall not affect the validity or enforceability of such Transaction and shall be deemed to be an affirmation of the terms contained in such Confirmation, absent manifest error. If both Parties send a Confirmation within three (3) Trading Days and their terms contradict, then each such Confirmation shall be deemed to be a notice of objection to the

terms of the other Party's Confirmation. In the event of any dispute, the provisions of A.2.2 shall apply.

- A.2.2.7 If a reference Index used in a Transaction is not published anymore the Parties shall agree in good faith negotiations on a new index / product that reflect the economic interest of both Parties intended by the original index / product. In case of any dispute the meditation / arbitration clause of **Article 15** shall apply.

A.2.3 Off-specification Gas

- A.2.3.1 In respect of each Transaction, the Parties are obliged to procure Gas at the Delivery Point that conforms to the transportation requirements of the respective transmission network operator.
- A.2.3.2 As soon as reasonably practicable one Party gets aware of off-specification Gas, it shall inform the other Party.

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Annex 3 (Transaction Price)

A.3.1 General Rules

- A.3.1.1 The Transaction Price is the price that one Party pays to the other Party for each Transaction and each Delivery Period agreed under this Master Agreement. The Transaction Price could consist of a Standing Charge or a Commodity Price, depending on the Transaction between the Parties.
- A.3.1.2 All calculations of the Transaction Price shall be in Euro. Where any of the input parameters required for a calculation are denominated in a different currency, such input parameter shall be, if not otherwise agreed, immediately converted (prior to any averaging) using the mid-point of the forward (for the calculation of a Transaction Price or Recalculation Compensation Payment) or Spot (for the calculation of a Reconciliation Payment) exchange rate taken from the EET Trading System (Endur) at the time.
- A.3.1.3 In respect of each Transaction, ERG shall notify EET of the Transaction parameters to be used for the determination of the Transaction Price. The Transaction parameters to be notified by ERG for the Delivery Period shall include:
- (a) Maximum Daily Quantity, being the maximum quantity which may be off-taken on any Day;
 - (b) Minimum Daily Quantity, being the minimum quantity which may be off-taken on any Day;
 - (c) Maximum Quantity, being the maximum quantity which may be off-taken in the respective Delivery Period;
 - (d) Take or Pay Quantity, being the minimum quantity which may be taken in the respective Delivery Period, below which Gas not taken must still be paid for;
- A.3.1.4 ERG shall provide EET with the transportation capacity (Dedicated Capacity) required by EET under each Transaction to access each relevant trading hub unless the Parties agree otherwise. In case of more than one Transaction in a specific Delivery Period only the netted Dedicated Capacity (Buy and Sell) shall be provided by ERG. In case ERG will fail to provide Dedicated Capacity ERG shall compensate EET through entering into a reverse Transaction to the affected Transaction from EET.
- A.3.1.5 EET shall be responsible for the calculation of the Transaction Price for settlement and shall provide the calculations to ERG within fifteen (15) Trading Days after the end of each Pricing Period.

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A.3.2 Calculation of the Transaction Price for Fixed Quantities

A.3.2.1 The Transaction Price shall consist of a Commodity Price which shall be determined at the Transaction day multiplied with the Transaction quantities under each Transaction and the remuneration for Optimisation activities according to A.3.2.6.

A.3.2.2 The pricing of a Transaction takes place over a period of Trading Days as specified in each Confirmation according to A.3.6. In case the Pricing Period is longer than one Month, EET shall provide ERG fifteen (15) Trading Days after the end of each Month within the Pricing Period with a Transaction Price calculation for the quantities priced during the previous Month.

A.3.2.3 The Commodity Price for each unit of Gas to be delivered during a Delivery Month and to be paid by the buyer under a Transaction to the seller shall be determined according to the following formula:

$$CP_M = FWP_M + MTC_M$$

where

CP_M is the Commodity Price paid by the buyer under each respective Transaction to the seller for a unit of Gas sold under each respective Transaction in the Delivery Month M ;

FWP_M is the Gas Forward Price for each respective Delivery Month for each respective market as specified in A.3.2.4.

MTC_M are the Marginal Transportation Costs per unit Gas transported as specified in A.3.2.5.

A.3.2.4 The Gas Forward Price for each respective Delivery Month shall be determined according to the following process:

- (a) Each Transaction shall specify which price curve(s) is/are relevant for the respective Pricing Month.
- (b) The Monthly Shaped Forward Curve for Gas shall be taken from the EET Trading Systems for each Trading Day of the Pricing Period.
- (c) In case EET is the Buyer, the Gas Forward Price used shall be determined according to the following formula:

$$FWP_M = \frac{1}{TD} \sum_{i=1}^{TD} \text{MIN}(FWP_{M,PH}; FWP_{M,NBP} - MTC_{M,j} - EC_{M,BC})$$

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In case EET is the Seller, the Gas Forward Price used shall be determined according to the following formula:

$$FWP_M = \frac{1}{TD} \sum_{i=1}^{TD} \text{MAX}(FWP_{M,PH}; FWP_{M,NBP} + MTC_{M,j} + EC_{M,BC})$$

where

FWP_M is the Gas Forward Price for the respective Delivery Month M

TD is the number of Trading Days in the respective Pricing Month

i is an index specifying a Trading Day

$FWP_{M,PH}$ is the Gas Forward Price for the respective Delivery Month m at the Pricing Hub

$FWP_{M,NBP}$ is the Gas Forward Price for the respective Delivery Month m at the NBP

$MTC_{M,j}$ are the Marginal Transportation Costs in the Delivery Month M for the Pipeline j , with j ="BBL" for the Pricing Hub TTF and j ="Interconnector UK" for the Pricing Hub ZH.

$EC_{M,BC}$ Entry Capacity Costs if applicable as agreed in the Transaction.

- (d) In case EET is the buyer under the Transaction, the Bid price shall be taken, in case EET is the seller under the Transaction, the Ask price shall be taken.

A.3.2.5 The Parties shall agree on the Marginal Transportation Costs, which are the additional cost (for each unit of Gas) that EET is obliged to pay (to a transportation network operator or otherwise) to transport Gas from the Delivery Point in a Transaction to the relevant trading hub, as may be more specifically defined in the Transaction. In case EET is the buyer in the Transaction, the Marginal Transportation Cost shall be negative, in case EET is the Seller, the Marginal Transportation Cost shall be positive.

A.3.2.6 EET shall be reimbursed by ERG with 0.015 EUR/MWh for the optimisation of handling of the quantities under these Transactions.

A.3.3 Calculation of the Transaction Price for the Flexible or Floating Price quantities

A.3.3.1 The Transaction Price consists of a Standing Charge, which shall be determined at the Transaction day, plus a Contract Price which is multiplied with the delivered quantities and remuneration for Optimisation activities.

A.3.3.2 The pricing takes place over a period of Trading Days as specified in a Confirmation according to A.3.6. In case the Pricing Period is longer than one Month, EET shall fifteen

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(15) days after the end of each Month within the Pricing Period provide ERG with a Transaction Price calculation for the quantities priced in this respective Month.

A.3.3.3 The Standing Charge for Delivery Month M, SC_M , shall be calculated as follows:

$$SC_M = \left(\begin{aligned} & (FWP_M^{bid} - CP_M - MTC_M) \bullet MQ_M + \\ & CALL(FWP_M^{bid}; CP_M + MTC_M; T; \sigma_M) \bullet CQ_M + \\ & PUT(FWP_M^{ask}; CP_M + MTC_M; T; \sigma_M) \bullet PQ_M \end{aligned} \right)$$

Where:

SC_M is the Standing Charge for Delivery Month M,

M is an index specifying each Delivery Month of the Delivery Period,

FWP_M is the Gas Forward Price for the respective Delivery Month of the Delivery Period, as defined in Article A3.3.4, FWP^{bid} shall refer to bid prices and FWP^{ask} shall refer to ask prices,

CP_M is the Contract Price for the respective Delivery Month as defined in Article A.3.3.5.,

MTC_M are the Marginal Transportation Costs for the respective Delivery Month for Gas off-taken under the Transaction, as defined in Article A.3.3.6.,

MQ_M is the Monthly Quantity planned to be off-taken in the respective Delivery Month, as defined in Article A.3.3.7.,

$CALL()$ is the value of a Call Option based as defined in Article A.3.3.8.

T is the time (in years) from the day of the calculation of the Transaction Price to the first Day of the respective Delivery Month,

σ_M is the annualised volatility of the Unshaped Gas Forward Price for the relevant period in which the respective Delivery Month occurs, as defined in Article A3.3.8,

CQ_M is the Call Quantity, being the quantity by which the Monthly Quantity can be increased in the respective Delivery Month, as defined in Article A.3.3.9,

$PUT()$ is the value of a Put Option based as defined in Article A.3.3.8,

PQ_M is the Put Quantity, being the quantity by which the Monthly Quantity can be reduced in the respective Delivery Month, as defined in Article A.3.3.10.

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A.3.3.4 The Gas Forward Price for each respective Delivery Month shall be determined according to the following process:

- (a) Each Transaction shall specify which price curve(s) is/are relevant for the respective Pricing Month.
- (b) The Monthly Shaped Forward Curve for Gas shall be taken from the EET Trading Systems for each Trading Day of the Pricing Period.
- (c) In case EET is the Buyer, the Gas Forward Price used shall be determined according to the following formula:

$$FWP_M = \frac{1}{TD} \sum_{i=1}^{TD} \text{MIN}(FWP_{M,PH}; FWP_{M,NBP} - MTC_{M,j} - EC_{M,BC})$$

In case EET is the Seller, the Gas Forward Price used shall be determined according to the following formula:

$$FWP_M = \frac{1}{TD} \sum_{i=1}^{TD} \text{MAX}(FWP_{M,PH}; FWP_{M,NBP} + MTC_{M,j} + EC_{M,BC})$$

where

FWP_M is the Gas Forward Price for the respective Delivery Month M

TD is the number of Trading Days in the respective Pricing Month

i is an index specifying a Trading Day

$FWP_{M,PH}$ is the Gas Forward Price for the respective Delivery Month M at the Pricing Hub

$FWP_{M,NBP}$ is the Gas Forward Price for the respective Delivery Month m at the NBP

$MTC_{M,j}$ are the Marginal Transportation Costs in the Delivery Month M for the Pipeline j , with j ="BBL" for the Pricing Hub TTF and j ="Interconnector UK" for the Pricing Hub ZH.

$EC_{M,BC}$ Entry Capacity Costs if applicable as agreed in the Transaction.

- (d) The forward price shall be the Bid Price.

A.3.3.5 The Contract Price for the respective Delivery Month shall be determined according to the following process:

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- (a) Each Confirmation shall specify a fixed Contract Price or a formula for the calculation of the Contract Price (a Contract Price Formula). This Contract Price Formula shall only include indices which both Parties agree upon are tradable.
- (b) The Gas Forward Prices to calculate a formula based Contract Price shall be taken from the EET Trading System (Endur) and averaged over all Trading Days of the Pricing Period. The Confirmation shall specify which Forward Price curve to be used.

A.3.3.6 The Parties shall agree on the Marginal Transportation Costs, which are the additional costs (for each unit of Gas) that EET is obliged to pay (to a transmission network operator or otherwise) to transport Gas from the Delivery Point to the relevant trading hub, as agreed in a Transaction.

A.3.3.7 The Monthly Quantity to be priced for each Delivery Month shall be determined according to the following process:

- (a) For each Delivery Month, initially allocate the sum of the Minimum Daily Quantity for each Day in the respective Delivery Month;
- (b) Take the Delivery Month with the highest Spread (or least negative) between the Gas Forward Price and the Contract Price for this Delivery Month.
- (c) in the case that the Spread is positive, increase the allocated quantity to the lower of (i) the sum of the Maximum Daily Quantity for each Day in the respective Delivery Month; and (ii) the quantity which would result in the aggregate allocated quantity for the Delivery Year being equal to the Maximum Annual Quantity.
- (d) In the case that the Spread is negative, check if the Adjusted Take or Pay Quantity has been met.
- (e) If yes, allocate no further Gas.
- (f) If no, increase the allocated quantity to the lower of (i) the sum of the Maximum Daily Quantity for each Day in the respective Delivery Month; and (ii) the quantity which would result in the aggregate allocated quantity for the Delivery Year being equal to the Adjusted Take or Pay Quantity.
- (g) Go to the Delivery Month with the next highest Spread between the Gas Forward Price and the Contract Price for this Delivery Month, and repeat steps c) and d).
- (h) Check that the Adjusted Take or Pay Quantity and the Maximum Quantity for the whole Delivery Period have been complied with.

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A.3.3.8 The value of a Call Option and a Put Option and the thereto related parameters shall be determined using the following formulae.

$$Call = FWP_{M,c,p} \times N(d_1) - (CP + MTC) \times N(d_1)$$

$$Put = (CP + MTC) \times N(-d_1) - FWP_{M,c,p} \times N(-d_1)$$

where :

$$d_1 = \frac{\ln\left(\frac{FWP_{M,c,p}}{CP + MTC}\right) + \sigma^2 \frac{T}{2}}{\sigma \sqrt{T}}$$

$$d_2 = d_1 - \sigma \sqrt{T}$$

$N(\)$ = cumulative value of normal distribution

$$\sigma = \sqrt{\frac{1}{58} \sum_{t=1}^n \left(\ln\left(\frac{FWP_{M,c,p,t-60}}{FWP_{M,c,p,t-61}}\right) - \mu \right)^2} * \sqrt{252}$$

$$\mu = \frac{1}{59} \sum_{t=1}^n \ln\left(\frac{FWP_{M,c,p,t-60}}{FWP_{M,c,p,t-61}}\right)$$

FWP_t = Unshaped Gas Forward Price for the relevant period on Trading Day t

Other parameters as in A.3.3.3.

A.3.3.9 The Call Quantity shall be determined according to the following process:

- (a) The Total Call Quantity shall be equal to the Maximum Quantity to be priced in the whole Delivery Period minus the sum of the Monthly Quantities for each Delivery Month allocated in accordance with Article A.3.3.7.
- (b) Take the Delivery Month with the highest Call Option value for the respective Delivery Month.
- (c) The Call Quantity for the respective Delivery Month shall be equal to:
 - (i) If the Monthly Quantity allocated in accordance with Article A.3.3.7 is equal to the sum of the Maximum Daily Quantity for each Day in the Delivery Month, zero;
 - (ii) Otherwise, the lower of (i) the sum of the Maximum Daily Quantity for each Day of the Delivery Month minus the Monthly Quantity allocated in accordance with Article A.3.3.7 and (ii) the Total Call Quantity minus the sum of the Call Quantities for all Delivery Months already determined in accordance with this Article A.3.3.9.
- (d) Go to the Delivery Month with the next highest Call Option value for the respective Delivery Month, and repeat step c).

A.3.3.10 The Put Quantity shall be determined according to the following process:

- (a) The Total Put Quantity shall be equal to the sum of the Monthly Quantities for each Delivery Month allocated in accordance with Article A.3.3.7 minus the Adjusted Take or Pay Quantity.
- (b) Take the Delivery Month with the highest Put Option value for the respective Delivery Month.
- (c) The Put Quantity for the respective Delivery Month shall be equal to:
 - (i) If the Monthly Quantity allocated in accordance with Article A.3.3.7 is equal to the sum of the Minimum Daily Quantity for each Day in the Delivery Month, zero;
 - (ii) Otherwise, the lower of (i) the Monthly Quantity allocated in accordance with Article A.3.3.7 minus the sum of the Minimum Daily Quantity for each Day of the Delivery Month; and (ii) the Total Put Quantity minus the sum of the Put Quantities for all Delivery Months already determined in accordance with this Article A.3.3.10,
- (d) Go to the Delivery Month with the next highest Put Option value for the respective Delivery Month, and repeat step c).

A.3.3.11 The Remuneration for Optimisation Activities for the Delivery Month M, ROA_M , shall be calculated as follows:

$$ROA_M = \left([ABS(FWP_M^{bid} - CP_M - MTC_M) \cdot MQ_M \cdot 1.5\%, 0] + [CALL(\bullet) \cdot CQ_M + PUT(\bullet) \cdot PQ_M] \cdot 15\% \right)$$

Where all parameters shall be as defined in Article A3.3.3 and ABS() means the absolute number.

A.3.4 Fixed Price Order

A.3.4.1 The Fixed Price in an Order shall be determined by ERG. The payment invoiced between Seller and Buyer equals the Fixed Price multiplied with the quantities off-taken by Buyer and the remuneration for the Optimisation activities according to A.3.4.4.

A.3.4.2 The Quantity to be off-taken in each Delivery Period shall be determined according to the following process:

- (a) At the end of each Trading Day EET is obliged to inform ERG about the Quantities sold / bought under a Fixed Price Order.

- (b) If Market Closing Price at a Trading Day (at the relevant trading hub) is above (in case ERG is the seller) or below (in case ERG is the buyer) the Fixed Price, the Minimum Quantity should be at least the Maximum Transaction Quantity per Trading Day (as defined in A.3.6).

A.3.4.3 ERG has the right to terminate a Fixed Price Order during any Trading Day. Quantities which are already sold or bought under a Fixed Price Order during a Trading Day (until termination) shall be considered as a Quantity to be taken or delivered.

A.3.4.4 EET shall be reimbursed by ERG with 0.015 EUR/MWh for handling of the quantities under these Transactions.

A.3.5 Spot-Forward Order

Spot Forward Order is a combination of two Fixed Priced orders, one for selling Gas in a specified Delivery Period and one for buying Gas in a specified Delivery Period, as described under A.3.4 with the following exceptions:

- (a) The quantities to be sold and purchased shall be equal.
- (b) There is no Minimum Daily Quantity to be traded by EET in case the Market Price is above or below the Fixed Price.
- (c) The quantities to be sold and purchased shall be determined by taking into account available transportation capacities to the respective trading hub.

A. 3.6 Determination of the Pricing Period and Maximum Transaction Quantity per Trading Day

A. 3.6.1 In order to enable EET to manage the Gas positions under each Transaction, the Parties agree to take into account the liquidity available in each relevant market.

A. 3.6.2 EET shall notify ERG at least five (5) Trading Days before the beginning of each Month on the Maximum Transaction Quantity per Trading Day for each trading hub and for each Delivery Period within the MTP Period. This notification will include the information specified in A.3.6.8. These Maximum Transaction Quantities are valid for all Trading Days in the respective Month.

A. 3.6.3 The Maximum Transaction Quantity shall take into account:

- (a) Zeebrugge Liquidity and 50% of the available NBP Liquidity in case ERG sells or purchases at a delivery point which is directly connected to the Zeebrugge Hub;
- (b) EET has the right to decrease the percentage of NBP Liquidity if there is no free reverse flow capacity on the Interconnector UK (in case ERG sells) or no free forward flow

capacity on the Interconnector UK (in case ERG buys) for Delivery Point which is directly connected to Zeebrugge Hub;

- (c) TTF Liquidity and 50% of the available NBP Liquidity in case ERG sells or purchases at a Delivery Point which is directly connected to the TTF;
 - (d) in case ERG is the buyer and EET has no sufficient forward flow on BBL, only TTF Liquidity at the Delivery Point is directly connected to the TTF;
 - (e) Volumes of Transactions currently being priced under this Master Agreement or the Master Agreement for the Financial Commodity Position. For the Physical Gas Positions Buy and Sell Orders shall be netted for the purpose of the Maximum Transaction Quantity.
- A. 3.6.4 The Pricing Period will be determined by dividing the total Transaction quantity per Delivery Month by the Maximum Transaction Quantity per Trading Day of the respective Delivery Month. The result out of this calculation shall be rounded to the higher whole number.
- A. 3.6.5 In case Liquidity decreases significantly compared to the agreed matrix during a Month, the Maximum Transaction Quantity shall be adjusted on request of EET which only shall effect new Transactions to be agreed between the Parties. In case additional Liquidity compared to the agreed matrix is available, the Parties may agree on a higher Maximum Transaction Quantity.
- A. 3.6.6 In case the Pricing Period resulting from A.3.6.4 is valued as too long by ERG, the Parties can agree on a new Transaction Price and a new Pricing Period reflecting the market conditions at the time of conclusion of such a Transaction.
- A. 3.6.7 In case the, EET reduces the Maximum Transaction Quantity according to A.3.6.3 (a), (d) or A3.6.5 and the Parties cannot agree on a Transaction Price and Pricing Period according to A 3.6.6, as an exception, ERG has the right to request EET to buy or sell a specified quantity of Gas for a specified Delivery Period based on best pricing conditions that can be achieved in the market. EET shall place the required orders without undue delay in the market. In case these offers can successfully be placed in the market, EET will sell or buy the Gas from/to ERG at the price realized in the market. ERG shall make available the transportation capacity required to transport the Gas to the respective trading hub.
- A. 3.6.8 The following table summarizes the available Liquidity and the daily Maximum Transaction Quantity per Trading Day in Mio kWh/d.

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Delivery Month	Available Liquidity (in Mio kWh/ Trading Day per Delivery Year)				daily Maximum Transaction Quantity (in Mio kWh/ Trading Day per Delivery Year)			
	Total	NBP	ZH	TTF	ZH (ERG Sells)	ZH (ERG Buys)	TTF (ERG Sells)	TTF (ERG Buys)
Day Ahead	105	74	10	22	29	29	40	40
Weekend (only on Fridays)	105	77	10	18	30	30	37	37
Jun 08	11.0	8.6	0.3	2.1	4.6	4.6	6.4	2.1
Jul 08	3.9	2.9	0.2	0.9	1.6	1.6	2.3	0.9
Aug 08	3.5	2.9	0.1	0.5	1.5	1.5	1.9	0.5
Sep 08	3.3	2.9	0.1	0.3	1.5	1.5	1.7	0.3
Oct 08	6.6	5.8	0.2	0.6	3.1	3.1	3.5	0.6
Nov 08	6.6	5.8	0.2	0.6	3.1	3.1	3.5	0.6
Dec 08	6.6	5.8	0.2	0.6	3.1	3.1	3.5	0.6
Jan 09	6.7	5.8	0.2	0.7	3.1	3.1	3.6	0.7
Feb 09	6.7	5.8	0.2	0.7	3.1	3.1	3.6	0.7
Mar 09	6.7	5.8	0.2	0.7	3.1	3.1	3.6	0.7
Apr 09	2.0	1.5	0.1	0.4	0.9	0.9	1.1	0.4
Mai 09	2.0	1.5	0.1	0.4	0.9	0.9	1.1	0.4
Jun 09	2.0	1.5	0.1	0.4	0.9	0.9	1.1	0.4
Jul 09	2.0	1.5	0.1	0.4	0.9	0.9	1.1	0.4
Aug 09	2.0	1.5	0.1	0.4	0.9	0.9	1.1	0.4
Sep 09	2.0	1.5	0.1	0.4	0.9	0.9	1.1	0.4
Oct 09	1.5	1.2	0.1	0.3	0.7	0.7	0.8	0.3
Nov 09	1.5	1.2	0.1	0.3	0.7	0.7	0.8	0.3
Dec 09	1.5	1.2	0.1	0.3	0.7	0.7	0.8	0.3
Jan 10	1.4	1.2	0.1	0.2	0.7	0.7	0.8	0.2
Feb 10	1.4	1.2	0.1	0.2	0.7	0.7	0.8	0.2
Mar 10	1.4	1.2	0.1	0.2	0.7	0.7	0.8	0.2
Apr 10	0.6	0.4	0.0	0.2	0.2	0.2	0.4	0.2
Mai 10	0.6	0.4	0.0	0.2	0.2	0.2	0.4	0.2
Jun 10	0.6	0.4	0.0	0.2	0.2	0.2	0.4	0.2
Jul 10	0.6	0.4	0.0	0.2	0.2	0.2	0.4	0.2
Aug 10	0.6	0.4	0.0	0.2	0.2	0.2	0.4	0.2
Sep 10	0.6	0.4	0.0	0.2	0.2	0.2	0.4	0.2
Oct 10	0.8	0.7	0.0	0.1	0.4	0.4	0.4	0.1

A.3.7 Determination of Price Curves

- A.3.7.1 For the purposes of this Master Agreement Price Curves shall be used for the determination of prices. Each Confirmation shall include a reference to a Price Curve to be used for pricing purposes and the respective Price Curve Documentation. For each Confirmation the Price Curves based on the latest version of the Price Curve Documentation shall be used.

A.3.7.2 For Commodities the Price Curves used under this Master Agreement shall reflect the Market Price and the difference between the Prices for buying and selling the respective Commodity (Bid-Prices and Ask-Prices). The Price Curves could be shaped in different Delivery Periods and/ or settlement periods compared to Commodities traded in the respective market. In case there is a reference to Mid-Market Curves, the Bid-/ Ask Spread shall be defined separately.

A.3.7.3 The Price Curve Documentation shall at least include the following components:

- (a) A reference to one or more sources for the Market Prices and/ or indices.
- (b) A method to calculate the Price Curve from above mentioned sources.
- (c) If required, a method to transform the result of A.3.7.3 (b) into a shaped Price Curve, e.g. a Monthly Shaped Forward Curve.
- (d) If required, a method to derive Bid-/Ask- Prices e.g. from broker screens, recorded telephone calls with EET counterparties etc.

A.3.7.4 The methods to derive these Curves shall be properly documented and are subject to change in order to best reflect actual market conditions. Changes to methods shall be agreed between the Parties.

A.3.7.5 At the Effective Date, the documentation as set out below has been defined, shared, understood and agreed by the Parties:

Price Curve or Bid-/ Ask Spread	Reference for documentation
Bid-/ Ask- Spread Gas Oil 0.1% Fob Barges Rotterdam	Document "Dokumentation BID/ASK-SPREAD für GCRG Tracker Hedging" version 1.0 and dated 14/09/2007.
Bid-/ Ask- Spread NBP Hedging	Document "Dokumentation BID/ASK-SPREAD für GCRG Tracker Hedging of Financial Gas Position" version 1.0 and dated 27/02/2008.
FO_ALL.EUR (Fuel Oil 1% Fob Barges Rotterdam)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
GO_0.1_FOBARA_B.EUR (Gasoil 0.1% Fob Barges Rotterdam)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
NG_IPE_IDX.EUR (ICE NBP M-1 Index)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
NG_NBP.GBP (Shaped NBP Mid)	Document "Market Curves for the

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	evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
NG_NBP_BID.GBP (Shaped NBP Bid)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
NG_NBP_OFFER.GBP (Shaped NBP Offer)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
NG_SAP.GBP (NTS System Average Price)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
NG_SMP_SELL.GBP (NTS System Marginal Price Sell)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
NG_SMP_BUY.GBP (NTS System Marginal Price Buy)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
NG_ZEEBRUGGE.GBP (Shaped ZHUB Mid)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
NG_ZEEBRUGGE_BID.GBP (Shaped ZHUB Bid)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
NG_ZEEBRUGGE_OFFER.GBP (Shaped ZHUB Offer)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
NG_TTF.EUR (Shaped TTF Mid)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
NG_TTF_BID.EUR (Shaped TTF Bid)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
NG_TTF_OFFER.EUR (Shaped TTF Offer)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
NG_EGT_H.EUR (Shaped EGT-H Mid)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
NG_NBP_TRADED.GBP (Traded Products NBP Mid)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
NG_NBP_TRADED_BID.GBP (Traded Products NBP Bid)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
NG_NBP_TRADED_OFFER.GBP (Traded Products NBP Offer)	Document "Market Curves for the evaluation of Trading Positions"

	version 3.1 and dated 26/06/2008.
NG_ZEEBRUGGE_TRADED.GBP (Traded Products ZHUB Mid)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
NG_ZEEBRUGGE_TRADED_BID.GBP (Traded Products ZHUB Bid)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
NG_ZEEBRUGGE_TRADED_OFFER.GBP (Traded Products ZHUB Offer)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
NG_TTF_TRADED.GBP (Traded Products TTF Mid)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
NG_TTF_TRADED_BID.GBP (Traded Products TTF Bid)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
NG_TTF_TRADED_OFFER.GBP (Traded Products TTF Offer)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
HEL.EUR (Rheinschiene HEL)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
HSL.EUR (Rheinschiene HSL)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
COAL_API2.USD (API#2 Mid)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
COAL_API2.EUR (API#2 Mid in Euro)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
COAL_BAFA.EUR (BAFA Quotierung)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
FX_ECB_GBP.EUR (ECB GBP <-> Euro exchange rate)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.
FX_ECB_USD.EUR (ECB USD <-> Euro exchange rate)	Document "Market Curves for the evaluation of Trading Positions" version 3.1 and dated 26/06/2008.

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Annex 4 Recalculation and Reconciliation of Transaction Prices

A.4.1 Recalculation of Transaction Prices

- A.4.1.1 Recalculation shall only be made in case of changes of the Transaction Parameters of the Flexible or Floating Price Quantities.
- A.4.1.2 If, at any point after a Transaction Price has been calculated in accordance with **Annex 3** or a Recalculation carried out, up to and including the Recalculation Cut-Off Date, ERG notifies EET of a change in the Transaction Parameters, Marginal Transportation Costs or Contract Price used for such Transaction Price calculation or Recalculation, then a Recalculation of the Transaction Price for each Delivery Month affected shall be performed.
- A.4.1.3 For the avoidance of doubt, the Parties may agree not to undertake a Recalculation for a change notified by ERG in case these changes are of minor significance.
- A.4.1.4 The responsibilities of ERG and EET in case of a Recalculation shall be as follows:
- (a) ERG shall be responsible for informing EET of any changes of the Transaction Parameters, Marginal Transportation Costs or Contract Price as soon as reasonably practicable.
 - (b) EET shall be responsible for calculation of the Recalculation Payment using the method in A.4.1.8 and shall provide ERG with details of the calculation no later than at the end of the Month immediately following the Month in which ERG notified EET of the change.
- A.4.1.5 Where the change notified by ERG in accordance with A.4.1.4 is sent during a Pricing Period then for the whole Pricing Period the Transaction Prices shall be calculated according to A.4.1.7.
- A.4.1.6 The Recalculation Cut-Off Date shall be the 5th Trading Day prior to the affected Delivery Month unless
- (a) the Parties agree otherwise or
 - (b) the number of Trading Days t in the Pricing Period for the quantities to be recalculated as determined according to A.3.6 exceed five (5) Trading Days. In this case the Recalculation Cut-Off Date shall be the t^{th} Trading Day before the Delivery Month.
- A.4.1.7 Any changes notified after the Recalculation Cut-Off Date are subject to the Reconciliation process pursuant to A.4.2.
- A.4.1.8 Recalculation of the Transaction Price is based on the following formula and will result in a Recalculation Payment:

$$\text{COMP_REV}_{M,t} = \{ \text{TP_NEW}_{M,t} (\text{MP}_t \cdot \text{CP}_{\text{new}} \cdot \text{MTC}_{\text{new}} \cdot \text{TQ}_{\text{new}}) \\ - \text{TP_OLD}_{M,t} (\text{MP}_t \cdot \text{CP}_{\text{old}} \cdot \text{MTC}_{\text{old}} \cdot \text{TQ}_{\text{old}}) \}$$

Where:

$\text{COMP_REV}_{M,t}$ is the Recalculation Payment for a Delivery Month M, calculated at time t. If the amount is positive, EET has to pay that amount to ERG. If the amount is negative, ERG has to pay that amount to EET.

$\text{TP_OLD}_{M,t}$ is the Transaction Price calculated for a Delivery Month M, calculated at time t using old Transaction Parameters, the old Contract Price Formula, the old Marginal Transportation Costs and the new market parameters.

$\text{TP_NEW}_{M,t}$ is the Transaction Price calculated for a Delivery Month M, calculated at time t using the new Transaction Parameters, the new Contract Price Formula, the new Marginal Transportation Costs and the new market parameters.

MP_t are the Gas Forward Prices (Ask Prices) calculated in accordance with A3.3.4 (a)-(c)) or Volatilities at the point in time t when Recalculation is done.

CP_{new} is the Contract Price calculated using the Contract Price Formula, the forecast of Non-Commodity Indices and the calculation rule for Non-Tradable Commodity Indices that are valid after notification of changes.

MTC_{new} are the Marginal Transportation Costs that are valid after notification of changes.

TQ_{new} are the Transaction Parameters that are valid after notification of changes.

CP_{old} is the Contract Price calculated using the Contract Price Formula, the forecast of Non-Commodity Indices and the calculation rule for Non-Tradable Commodity Indices that were valid directly before notification of the changes .

MTC_{old} are the Marginal Transportation Costs that were valid directly before notification of changes.

TQ_{old} are the Transaction Parameters that were valid directly before notification of the changes.

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A.4.2 Reconciliation

A.4.2.1 The Reconciliation process applies to the following events:

- (a) Changes to the Transaction Parameters notified by the seller to the buyer after the Recalculation Cut-Off Date (Seller Default).
- (b) Under-delivery or over-delivery, as compared to the quantity of Gas properly nominated for delivery by the buyer in accordance with the Confirmation (Seller Default).
- (c) Delivery of off-specification Gas as defined in A.2.3.
- (d) Inability by the buyer to off-take the Transaction quantities (Buyer default).
- (e) Any other event explicitly identified and agreed in a Transaction, for which a payment mechanism shall be defined.

A.4.2.2. Responsibilities in case of Seller Default:

- (a) Each Party is responsible for informing the other Party of changes in firm quantities delivery of off-specification Gas as soon as reasonably practicable after it becomes aware of such change.
- (b) In respect of changes of Transaction Parameters notified after the Recalculation Cut-Off Date, at the time of making any nomination under the Transaction, the buyer shall be entitled to notify the seller of the quantity that the buyer would reasonably have nominated (a Shadow Nomination). Such difference between the actual nomination and the Shadow Nomination shall be treated as an under-delivery or over-delivery accordingly.
- (c) The buyer is responsible for the calculation of Reconciliation Compensation Payments.

A.4.2.3 In case of delivery of off-specification Gas, the seller either compensates the buyer for any penalties that the buyer is charged for selling the off-specification Gas or the delivery is not accepted by the buyer and will thus be handled as an under-delivery of firm qualities.

A.4.2.4 Calculation of the Reconciliation Compensation Payment will take place at the end of each Delivery Month, for each Day separately in the Delivery Month, according to the following formula (unless otherwise defined in a Confirmation):

$$\text{COMP_REC}_{q,D} = Q_{\text{change},D} \cdot (P_{\text{rec},D} - \text{CP}_D - \text{MTC}_D)$$

Where:

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$COMP_REC_{q,D}$	Reconciliation Compensation Payment from the seller to the buyer for a certain quantity q that was over-/under delivered or not taken in case of Buyers default on a day D under a specific Transaction. If the value is positive, the seller has to pay that amount to the buyer. If the value is negative, the buyer has to pay that amount to the seller.
$Q_{change,D}$	is the change in the quantity delivered to the buyer in accordance with the Transaction or the quantities not off-taken in case of Buyers default in respect of Day D , where an under-delivery shall be positive and an over-delivery shall be negative.
CP_D	Contract Price for Day D . Zero, if no Contract Price is agreed in the Transaction.
$P_{rec,D}$	Price to be used for purposes of Reconciliation in respect of Day D (as specified in A4.2.5).
MTC_D	Marginal Transportation Costs for Day D .

A.4.2.5. The price used for Reconciliation (P_{rec}) shall be:

(a) If

(i) the seller or buyer default or the delivery of off-specification Gas was notified no later than 12:00hrs on the Day prior to the Day of delivery; and

(ii) Such under-delivery or over-delivery relates to any market other than the UK.

then P_{rec} is the day-ahead Market Price (Bid price, in case of over-delivery and Ask price in case of under-delivery) at the relevant trading hub, as specified in the Transaction.

(b) Otherwise. P_{rec} is the balancing price of the transmission system operator as specified in the Transaction, depending on whether the Reconciliation for such Trading Day is an over-delivery or under-delivery.

A.4.2.5 For the avoidance of doubt, it is possible to have an over-delivery and an under-delivery in respect of a particular day.

A.4.2.6 If the event that causes the Reconciliation also affects the Transaction Parameters or Transaction Price calculation for any of the following Delivery Months (e.g. Min_{take} quantities for the remaining Months of the Delivery Period), a Recalculation according to A.4.1 will be initiated.

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Annex 8 List of Contact Persons

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Annex 11.5 Transactions prior to the Effective Date

In course of the spin-off of the trading activities from ERG to EET the ERG division Energy Trading is spun off having legal effect on the Effective Date. This requires an operational solution of how to deal with internally “agreed” Transactions and deliveries between the ERG division Energy Trading and the other ERG divisions which is documented as follows:

1. Transactions “agreed” between the ERG Energy Trading division (ER_Trading/DG_Trading) and other ERG divisions before the Effective Date and deliveries fulfilled after 1st January 2008 and before Effective Date as documented in the ERG/ EET trading system and the memo issued by Dr. Haaf dated 19 June 2008 are booked in the accounting areas (Buchungskreise) of the respective divisions based on the prices internally agreed.
2. For Transactions “agreed” before the Effective Date and deliveries fulfilled after the Effective Date as documented in the ERG/ EET trading system and in the memo issued by Dr. Haaf dated 19 June 2008 the provisions set out in this Master Agreement shall apply accordingly but on the basis of prices internally “agreed”.
3. Lists of Transactions mentioned under 1. and 2. above will be prepared by ERG after the Effective Date as documented in the ERG trading system.

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