

This document includes a report summary, a table of contents, report format and price information, and an order form.

European gas trading volumes reached a new peak in 2007, with existing markets seeing a boost in trading activity and important new trading markets and exchanges starting to establish themselves.

With customer choice now in place across Europe, real competition is starting to appear for the first time in certain key national markets.

However, the establishment of an open European gas market is far from complete, and a proposed new round of legislation, intended to pave the way for increased cross-border trading, has ignited much controversy and debate.

This 288 page report offers a comprehensive analysis of the trading market, the brokers and exchanges, EU competition and environmental policy factors, top industry players, and more. The market's dimensions and trends are profiled in 112 tables and 56 charts.

The report is structured as follows:

Chapter 1 – Is Liberalisation Making Progress?

this chapter reviews gas market liberalisation, including the content and possible impact of the third energy package. It assesses the state of play in 2008, and outlines the existing legislative foundation and voluntary processes that underpin European gas market opening. It then looks at the third energy package and views about its content and its likely impact.

Chapter 2 - The Trading Markets – Is Liquidity Growing?

this chapter reviews the trading volumes at established and emerging gas trading locations in Europe. It assesses whether overall gas trading liquidity is growing, and what the barriers to growth are. Each of the European trading markets, both exchange-based and over-the-counter is reviewed in detail. The chapter concludes with a review of the instruments being traded, including use of derivatives.

Chapter 3 - What's Driving Gas Prices – Oil, Emissions or Supply and Demand?

this chapter looks into the drivers behind gas prices in Europe, including the impact of oil prices through long-term contract indexation, the linkage between local and international prices through LNG trade, and the

effects of power and emissions prices on the gas markets. It reviews the development of wholesale and retail market prices over the past year.

Chapter 4 - Gas Market Fundamentals – What are the Major Trends?

This chapter provides an overview of the key fundamentals of the European gas market, including gas reserves and production, consumption trends, trade flows and import dependency. It provides a comparison of the size and importance of markets and regions within Europe and also sets the European market within its global context.

Chapter 5 - Has Europe Got The Right Gas Infrastructure?

This chapter reviews Europe's existing and planned gas infrastructure, including import pipelines, LNG terminals and storage. It assesses whether Europe got the infrastructure it needs to ensure security of supply now and in the future. It provides details of existing pipeline infrastructure, regional interconnections and planned major new pipeline projects; existing LNG terminals and planned new projects; existing and planned storage provision.

Chapter 6 - Market Participants:

this chapter reviews the main European gas market participants, with pen portraits and key financial statistics. Included are physical gas suppliers, energy trading companies, banks & investment companies and brokers.

Chapters 7 to 15 – National and Regional Markets:

each of these chapters reviews the gas market of a single state or a region of Europe. Details are given of production and consumption of gas, imports and exports and key infrastructure including transmission and transit systems, LNG terminals and storage facilities. The progress of market liberalisation and the development of competition is assessed, and the main national or regional players are listed and described, with their market shares.

Chapters 16 – Conversion Factors:

this chapter explains the units, unit conversion factors and currency conversions used in this report.

**To order this
report please fill in
the last page and
fax it to us on
+44 20 7900 3844**

Table of Contents

1	IS LIBERALISATION MAKING PROGRESS?	15
1.1	THE STATE OF LIBERALISATION IN 2008	15
1.1.1	Market Opening and Customer Choice	16
1.1.2	Third Party Access	20
1.1.3	Unbundling	22
1.1.4	Transparency	25
1.1.5	Concentration	25
1.1.6	Cross-Border Trading	27
1.2	EXISTING LEGISLATIVE STRUCTURE	28
1.2.1	EU Gas Directives	28
1.2.2	EU Gas Regulation	30
1.2.3	European Trading Legislation	31
1.2.4	European Environmental Legislation	32
1.3	EXISTING PROCESSES AND BODIES	35
1.3.1	Annual Reporting	35
1.3.2	Madrid Forum	37
1.3.3	Gas Regional Initiatives	37
1.3.4	EC Energy Sector Competition Enquiry	39
1.3.5	Other Competition Enquiries	40
1.3.6	Gas Release Programmes	41
1.4	PROPOSED LEGISLATION - THIRD ENERGY PACKAGE	42
2	THE TRADING MARKETS – IS LIQUIDITY GROWING?	44
2.1	TRADING VOLUMES	44
2.2	TRADING LOCATIONS	50
2.3	NBP AND UK MARKETS	54
2.3.1	OTC Trading	55
2.3.2	On-the-day Commodity Market (OCM)	57
2.3.3	ICE Gas Futures	58
2.4	TTF AND DUTCH MARKETS	59
2.4.1	APX Gas NL	61
2.4.2	Endex Gas Futures	62
2.4.3	Essent Xpress Trading Platform	62
2.5	ZEEBRUGGE MARKETS	63
2.5.1	APX Gas ZEE	65
2.6	GERMAN MARKETS	65
2.6.1	BEB VTP	66
2.6.2	E.ON Gastransport (EGT) VTP	68
2.6.3	Other OTC Trading Locations	69
2.6.4	EEX Gas Futures	69
2.6.5	Store-x and Trac-x Capacity Exchanges	71
2.6.6	APX Capacity Exchange	71
2.7	PEGS AND FRENCH MARKET	71
2.7.1	Powernext – GRTgaz Balancing Platform	73
2.8	PSV AND ITALIAN MARKET	73
2.9	CEGH AND BAUMGARTEN	76
2.10	OTHER TRADING LOCATIONS	77
2.10.1	Iberian Markets	77
2.10.2	Danish Markets	79
2.10.3	Other Markets	80
2.11	TRADED INSTRUMENTS	80
2.11.1	Term Contracts	82
2.11.2	Spot and Forward Trading	84
2.12	EXCHANGES AND OTC TRADING	86
2.12.1	Exchanges	87
2.12.2	OTC Clearing	88
3	WHAT'S DRIVING GAS PRICES - OIL, EMISSIONS OR SUPPLY AND DEMAND?	89
3.1	WHOLESALE GAS PRICES	89
3.2	GAS PRICE DRIVERS	90
3.2.1	Spot and Forward Market Mechanics	91
3.2.2	Spot and Forward Price Drivers	92
3.2.3	Long-Term Contract Pricing	94
3.2.4	Interaction between Contract and Spot markets	95

3.2.5	The Influence of the LNG Market	98
3.2.6	The Influence of the Carbon Market	101
3.3	END-USER GAS PRICES	102
4	GAS MARKET FUNDAMENTALS – WHAT ARE THE MAJOR TRENDS?	107
4.1	EUROPEAN GAS RESERVES AND PRODUCTION	107
4.2	CONSUMPTION TRENDS	113
4.2.1	Power Generation Projects	116
4.3	TRADE FLOWS	116
4.3.1	LNG Imports	123
4.4	SECURITY OF SUPPLY	124
5	HAS EUROPE GOT THE RIGHT GAS INFRASTRUCTURE?	127
5.1	TRANSMISSION INFRASTRUCTURE	127
5.1.1	Existing Pipeline Infrastructure	129
5.1.2	Major New Pipeline Projects	130
5.1.3	Northern European Projects	132
5.1.4	South Eastern European Projects	134
5.1.5	South Western European Projects	135
5.1.6	Other Projects	136
5.2	LNG	137
5.2.1	Existing Terminals	137
5.2.2	LNG Terminal Projects	138
5.3	GAS STORAGE	140
5.3.1	Flexibility	142
5.3.2	Trans-European Energy Networks (TEN-E) Programme	145
6	MARKET PARTICIPANTS	148
6.1	MAJOR GAS SUPPLIERS	148
6.2	TRADING MARKET PARTICIPANTS	162
6.3	EXCHANGE PARTICIPANTS	163
6.4	BROKERS	170
6.5	MERGERS AND ACQUISITIONS	171
7	BENELUX	173
8	CENTRAL EUROPEAN (CE) REGION	187
9	FRANCE	198
10	GERMANY	208
11	IBERIAN PENINSULA: SPAIN AND PORTUGAL	225
12	ITALY	235
13	NORDIC AND BALTIC REGION	245
14	SOUTH-EASTERN EUROPEAN (SEE) REGION	259
15	UK AND IRELAND	269
16	DEFINITIONS AND CONVERSION FACTORS	281

Tables

Table 1	European Gas Market Regulators and Market Opening, September 2008	17
Table 2	Effective Opening of European National Gas Markets, September 2008	18
Table 3	Estimated Cumulative Switching Rates to July 2008	19
Table 4	TPA Arrangements for LNG Terminals, 2008	21
Table 5	TPA Arrangements for Gas Storage Facilities, 2008	22
Table 6	Unbundling of European Gas Infrastructure, September 2008	23
Table 7	National Gas Market Shares of Dominant Suppliers, 2007	26
Table 8	European Gas Release Schemes, as of September 2008	42
Table 9	Recorded Hub and Exchange Trading Volumes 2006 - 2007	44
Table 10	Estimated Gas Trading Volumes by Country, 2006 - 2007	47
Table 11	Characteristics of European Gas Trading Markets, 2008	52
Table 12	Gasoil Price Indexation of European Gas Contracts, 2007-2008	89
Table 13	European Gas Reserves Ranked by Country, 2007	109
Table 14	European Gas Production by Country, 2006 - 2007	112
Table 15	European Gas Consumption by Country, 2006 - 2007	116
Table 16	European Gas Imports and Exports by Country, 2007	118
Table 17	European Gas Imports by Source, 2007	122
Table 18	European LNG Imports by Destination, 2007	124
Table 19	EU-27 Gas Import Dependency, 2000 - 2030	125
Table 20	European Major International Gas Pipelines, 2008	129
Table 21	European Major Planned International Gas Pipelines, 2008	131
Table 22	European Operating LNG Terminals, 2008	137
Table 23	European Planned LNG Terminals, 2008	139
Table 24	European Existing and Planned Gas Storage Facilities, 2008	141
Table 25	Seasonal Flexibility in Northern Europe, 2007	144
Table 26	Gas Infrastructure Projects Receiving TEN-E Funding, 2004-07	146
Table 27	Top 20 Companies by European Gas Sales, 2007	149
Table 28	E.ON Shareholdings in European Wholesale Gas Suppliers, August 2008	154
Table 29	European Gas Exchange Major Participants, as of August 2008	164
Table 30	Mergers and Acquisitions in the European Gas Market, 2007	171
Table 31	Dutch Gas Reserves and Production, 2006 - 2007	173
Table 32	Benelux Gas Consumption by Sector, 2007	174
Table 33	Benelux Gas Imports and Exports, 2006 - 2007	176
Table 34	Belgian Operating LNG Terminals, 2008	180
Table 35	Dutch Planned LNG Terminals, 2008	180
Table 36	Benelux Gas Storage Facilities, 2008	182
Table 37	Benelux Planned Gas Storage Facilities, 2008	183
Table 38	Benelux Major Gas Market Participants, 2007	185
Table 39	Belgian Gas Market Shares, 2007	185
Table 40	CE Gas Reserves and Production, 2007	187
Table 41	CE Gas Consumption, 2007	188
Table 42	CE Gas Imports by Origin, 2007	189
Table 43	CE National Gas Networks, 2008	191
Table 44	CE Gas Storage Facilities, 2008	192
Table 45	CE Gas Market Regulators and Market Opening, 2008	193
Table 46	CE Region Gas Market Shares of Dominant Suppliers, 2007	194
Table 47	CE Major Gas Market Participants, 2007	197
Table 48	French Gas Reserves and Production, 2006 - 2007	198
Table 49	French Gas Consumption by Sector, 2006 - 2007	199
Table 50	French Gas Imports and Exports, 2006 - 2007	201
Table 51	French Existing LNG Terminals, 2008	203
Table 52	French Planned LNG Terminals, 2008	203
Table 53	French Existing Gas Storage Facilities, 2008	205
Table 54	French Planned Gas Storage Facilities, 2008	205
Table 55	French Major Gas Market Participants, 2007	206
Table 56	German Reserves and Production, 2006 - 2007	208
Table 57	German Gas Consumption by Sector, 2006 - 2007	210
Table 58	German Gas Imports and Exports, 2006 - 2007	211
Table 59	German Gas Transmission Networks, December 2007	213
Table 60	German Gas Storage Facilities, 2007	215
Table 61	German Planned LNG Terminals, 2008	216
Table 62	German Network Zones, as of September 2008	218
Table 63	German Network Zones from October 2008	220
Table 64	German Major Gas Market Participants, 2007	223
Table 65	Iberian Gas Consumption by Sector, 2007	225

Table 66	Iberian Gas Imports and Exports, 2006-2007	227
Table 67	Iberian Operating LNG Terminals, 2008	230
Table 68	Iberian Planned LNG Terminals, 2008	231
Table 69	Iberian Gas Storage Facilities, 2008	231
Table 70	Spanish Planned Gas Storage Facilities, 2008	232
Table 71	Iberian Major Gas Market Participants, 2007	233
Table 72	Spanish Gas Market Shares, 2008	234
Table 73	Italian Gas Reserves and Production, 2006 - 2007	235
Table 74	Italian Gas Consumption by Sector, 2006 - 2007	236
Table 75	Italian Gas Imports and Exports, 2006 - 2007	238
Table 76	Italian Operating LNG Terminals, 2008	240
Table 77	Italian Planned LNG Terminals, 2008	240
Table 78	Italian Gas Storage Facilities, 2008	241
Table 79	Italy Planned Gas Storage Facilities, 2008	242
Table 80	Italian Major Gas Market Participants, 2007	243
Table 81	Italian Gas Market Shares, 2007	244
Table 82	Norwegian Gas Reserves and Production, 2006 - 2007	245
Table 83	Danish Gas Reserves and Production, 2006 - 2007	247
Table 84	Nordic and Baltic Gas Consumption by Sector, 2007	247
Table 85	Nordic Gas Imports and Exports, 2006 - 2007	250
Table 86	Nordic and Baltic Onshore Gas Transmission Systems, 2007	251
Table 87	Nordic Gas Export Pipelines, 2008	253
Table 88	Nordic Gas Storage Facilities, 2008	253
Table 89	Nordic and Baltic Gas Market Regulators and Market Opening, 2008	255
Table 90	Nordic and Baltic Major Gas Market Participants, 2007	258
Table 91	SEE Countries	259
Table 92	SEE Gas Reserves and Production, 2007	260
Table 93	SEE Gas Consumption, 2007	260
Table 94	SEE Gas Imports by Origin, 2007	261
Table 95	SEE National Gas Networks, 2008	263
Table 96	SEE Gas Storage Facilities, 2008	264
Table 97	SEE Operating LNG Terminals, 2008	264
Table 98	SEE Planned LNG Terminals, 2008	265
Table 99	SEE Gas Market Regulators and Market Opening, September 2008	266
Table 100	SEE Gas Market Participants, 2007	267
Table 101	UK and Irish Gas Reserves and Production, 2007	269
Table 102	UK and Irish Gas Consumption by Sector, 2007	270
Table 103	UK and Irish Gas Imports and Exports, 2006 - 2007	273
Table 104	UK Operating LNG Terminals, 2008	275
Table 105	UK and Irish Planned LNG Terminals, 2008	276
Table 106	UK and Irish Gas Storage Facilities, 2008	277
Table 107	UK Planned Gas Storage Facilities, 2008	278
Table 108	UK and Irish Major Gas Market Participants, 2007	279
Table 109	UK Gas Market Shares, at March 2007	280
Table 110	Gas Units and Conversion Factors	282
Table 111	Energy Content of European Gas	283
Table 112	Currency Conversion Factors	284

Charts

Chart 1	European Total Gas Trading Volumes by Country, 2007	49
Chart 2	Monthly Nominated Trading Volumes at NBP, Jan 2005 to Jul 2008	55
Chart 3	Monthly Trading Volumes on OCM, Jan 2003 to Dec 2007	58
Chart 4	Annual Trading Volume on ICE Gas Futures, Jan 1997 to Jun 2008	59
Chart 5	Monthly Trading Volume at TTF, Jan 2003 to Aug 2008	60
Chart 6	Monthly Gas Trading Volume at Endex, Mar 2006 to Jul 2008	62
Chart 7	Monthly Trading Volumes at Zeebrugge, Jan 2000 to Aug 2008	64
Chart 8	Monthly Gas Trading Volume at BEB, Jan 2006 to Aug 2008	67
Chart 9	Monthly Gas Trading Volume at EGT, Oct 2006 to Aug 2008	68
Chart 10	Monthly Gas Trading Volume at EEX, Jul 2007 to Aug 2008	70
Chart 11	Monthly Trading Volume at the GRTgaz PEGs, Mar 2005 to Aug 2008	72
Chart 12	PSV Trading Volumes, Oct 2003 to Aug 2008	74
Chart 13	CEGH Trading Volumes, Oct 2005 to Aug 2008	77
Chart 14	Monthly Trading Volumes on MS-ATR, Jan 2006 to Apr 2008	78
Chart 15	UK Forward and German Border Gas Prices, Jan 2005 to May 2008	90
Chart 16	TTF and NBP Day-Ahead Gas Prices, Jan 2006 to Jul 2008	97

Chart 17	European LNG Import Capacity and Throughput, 2002 to 2008	98
Chart 18	Average European Household Gas Prices, 2H 2007	104
Chart 19	Average European Industrial Gas Prices, 2H 2007	106
Chart 20	World Gas Reserves by Region, December 2007	107
Chart 21	European Gas Reserves by Country, December 2007	108
Chart 22	World Gas Production by Region, 2007	110
Chart 23	European Gas Production by Country, 2007	111
Chart 24	World Gas Consumption by Region, 2007	113
Chart 25	European Gas Consumption, 2007	114
Chart 26	World Gas Net Import/Export by Region, 2007	117
Chart 27	European Cross-Border Gas Connections Schematic, 2007	120
Chart 28	European Gas Imports by Source, 2007	122
Chart 29	European LNG Imports by Destination, 2007	123
Chart 30	EU-27 Gas Import Dependency, 2000 - 2030	125
Chart 31	Cumulative European LNG Import Capacity Estimates, 2008 - 2015	138
Chart 32	European Existing and Planned Storage Capacity, 2008	142
Chart 33	Seasonal Flexibility in Northern Europe, 2007	144
Chart 34	Top 20 Companies by European Gas Sales, 2007	148
Chart 35	Belgian Gas Consumption by Sector, 2007	174
Chart 36	Dutch Gas Consumption by Sector, 2007	175
Chart 37	Belgian Gas Imports by Origin, 2007	177
Chart 38	Dutch Gas Exports by Country, 2007	177
Chart 39	Dutch Gas Producers Share of Net Production, 2007	186
Chart 40	French Gas Consumption by Sector, 2007	198
Chart 41	GRTgaz Transmission System Demand Forecast, 2008 - 2017	200
Chart 42	French Gas Imports by Origin, 2007	201
Chart 43	German Gas Consumption by Sector, 2007	209
Chart 44	German Gas Imports by Origin, 2007	211
Chart 45	Spanish Gas Consumption by Sector, 2007	225
Chart 46	Spanish Actual and Forecast Gas Consumption, 2006 - 2016	226
Chart 47	Spanish Gas Imports by Origin, 2007	228
Chart 48	Italian Gas Consumption by Sector, 2007	236
Chart 49	Italian Forecast Production and Demand, 2007 - 2015	237
Chart 50	Italian Gas Imports by Origin, 2007	237
Chart 51	Norwegian Gas Exports by Destination, 2007	251
Chart 52	Norwegian Gas Producers by Equity Share of Production, 2007	257
Chart 53	UK Gas Consumption by Sector, 2007	270
Chart 54	UK Actual and Forecast Production and Demand, 2000-2017	271
Chart 55	Irish Gas Consumption by Sector, 2007	272
Chart 56	UK Gas Imports by Origin, 2007	272

About the Authors



Mary Jackson and Nigel Harris are independent energy market consultants. Each has over 15 years experience of working with energy traders, providing analysis, training, information and technology services to companies engaged in the oil, gas and electricity markets. Mary and Nigel regularly write, speak and lecture on the gas markets and energy trading.

Kingston Energy Consulting is a consulting company that specialises in energy markets and energy market information. Its services are aimed at companies that trade in the oil, gas and power markets and at the information and software companies that serve them.

Kingston Energy Consulting Ltd

e-mail: info@kingstonenergy.com

web: www.kingstonenergy.com

About the Publisher



Prospex Research analyses the European energy business, focusing on wholesale markets for power, gas, coal and emissions allowances.

Prospex is independent and committed to relevant, accurate and unrestricted reporting and analysis. It does not accept sponsorship that would compromise this commitment.

Prospex Research Ltd

e-mail: info@prospex.co.uk

web: www.prospex.co.uk

Our Latest Reports

- **European Power Projects** (September 2008)
- **European Power Trading** (May 2008)

Our earlier reports:

2007: European Emissions Trading Market, European Gas Trading, European Power Trading, Dutch Gas Market, European Coal Trading.

2006: European Gas Trading, European Power Trading, Italian Power Market.

2005: European Coal Trading, European Gas Trading, European Power Trading, European Emissions Trading Market, International Dry Freight Market.

2004: European Gas Trading, European Power Trading, North Africa Gas & Power, Dutch Gas Market.

2003: European Power Trading Technology, German Power Market, French Power Market, European Power in Numbers.

2002: European Power Trading, Dutch Wholesale Power Market, French Power Market, European Power Trading Technology.

2001: European Power Trading, Electricity Transmission Access under NETA.

Report Format and Price Info



European Gas Trading 2008 will be sent to you by e-mail in electronic format (Adobe Acrobat) in one of two different versions, depending on your needs:

- **Individual User:** one electronic file for individual use only. The file may be printed only once and cannot be copied or redistributed in any format. This version costs **£1,195** (pounds sterling) or ~ €1,505 euros (at the time of publication).
- **Multiple User:** this version can be used by more than one person or, in the case of five or more users, even placed on your company's intranet. See the table below for multiple user pricing and savings in pounds sterling.

A 10% discount is available to previous report buyers

Number of users	2	3	4	5 or over
Full price, £ (pound sterling)	2,390	3,585	4,780	5,975
Multiple user savings on cover price	382	681	1,099	1,793
Multiple user price	2,008	2,904	3,681	4,183
10% discount for previous buyers	201	290	368	418
Multiple user price for previous report buyers	1,807	2,613	3,313	3,764

Value Added Tax (VAT): UK purchasers please add 17.5% VAT. Purchasers from any other EU member state must state their VAT registration number on the order form.

