

Financial markets impact on energy prices

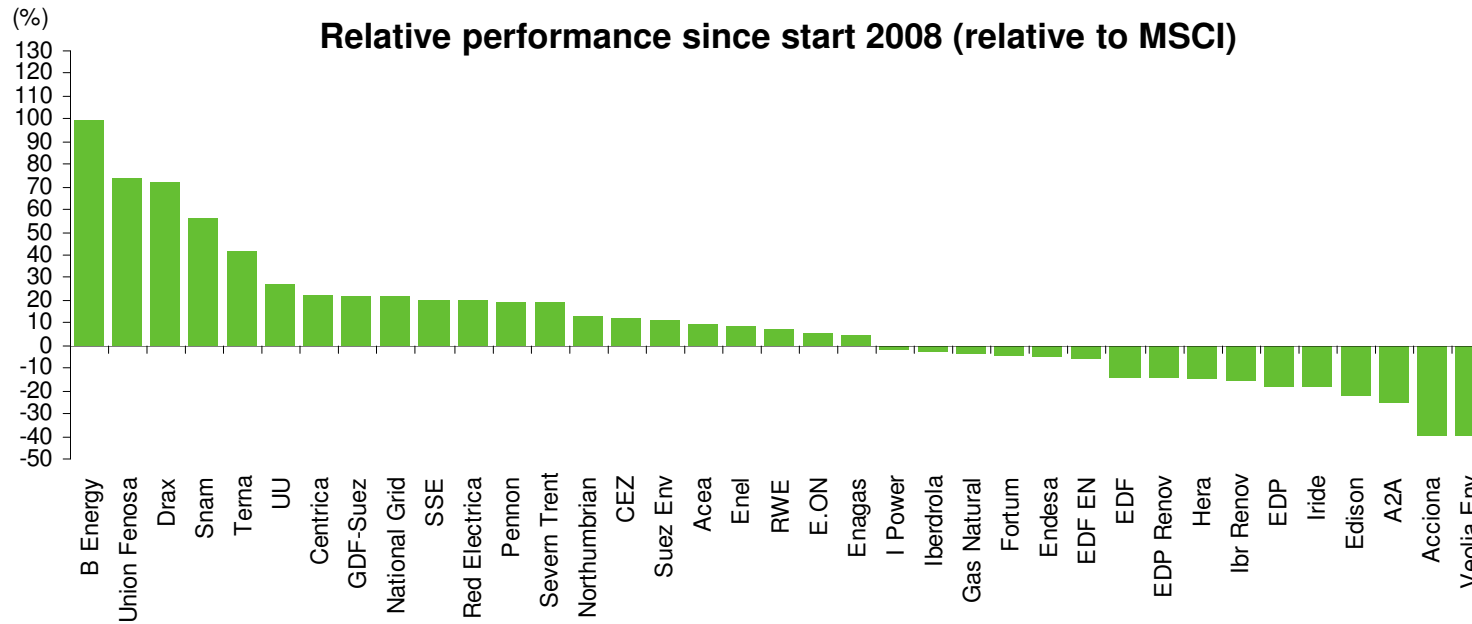
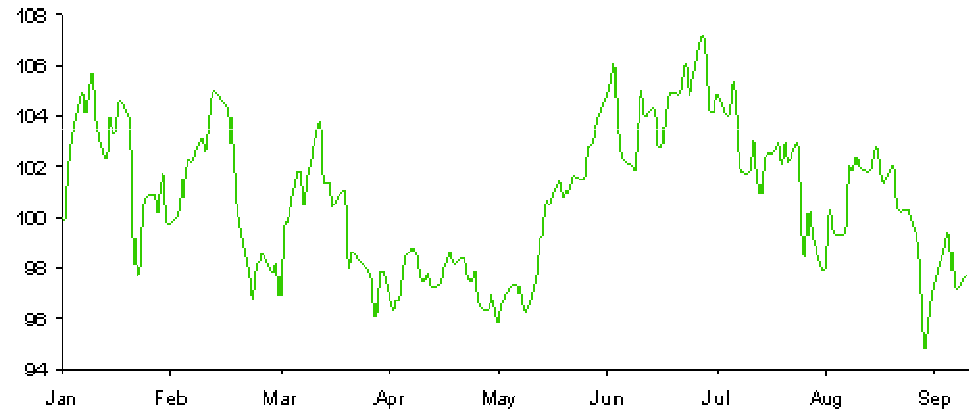
Antonio Tognoli

Identity crisis of the utilities sector so far in 2008

Long-term Utilities sector relative performance

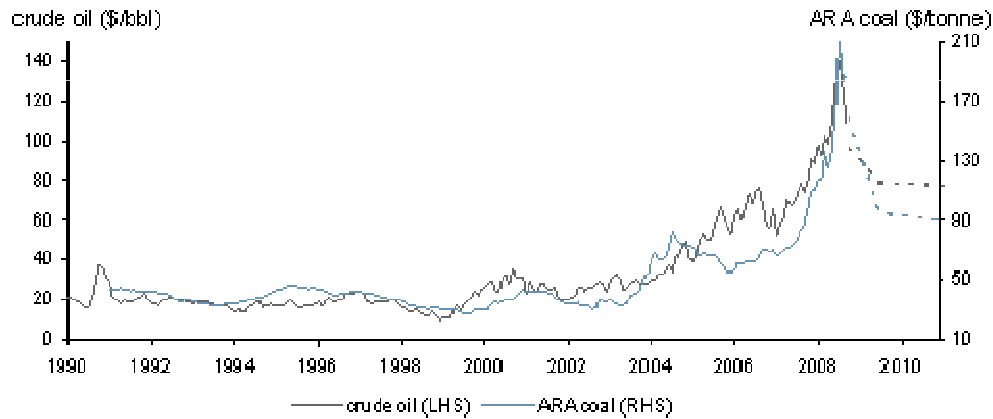


Utilities sector relative performance since Jan 2008

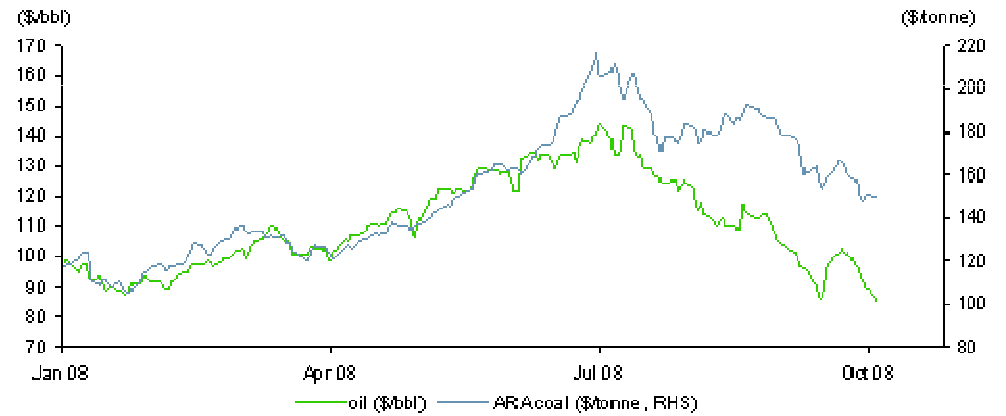


Commodity prices

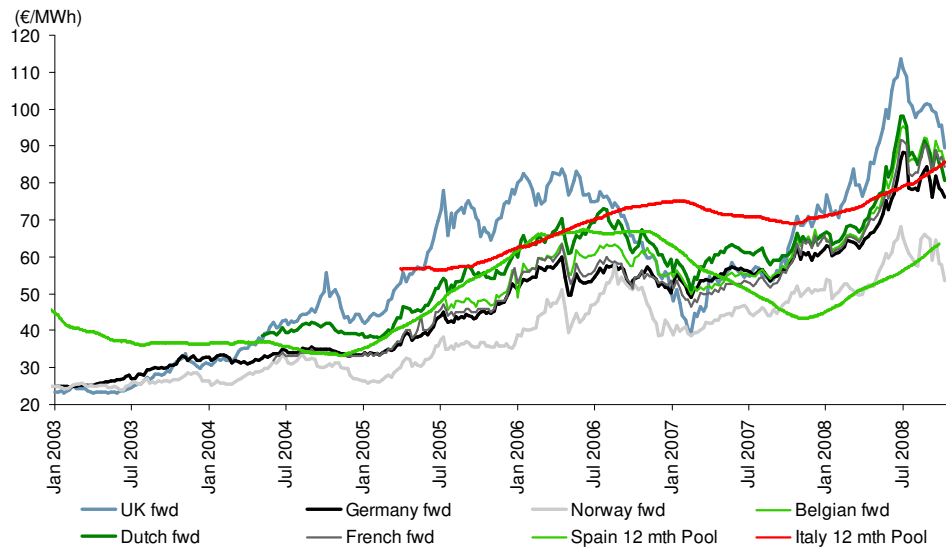
Crude oil and coal



Oil/coal relationship breakdown



European electricity prices

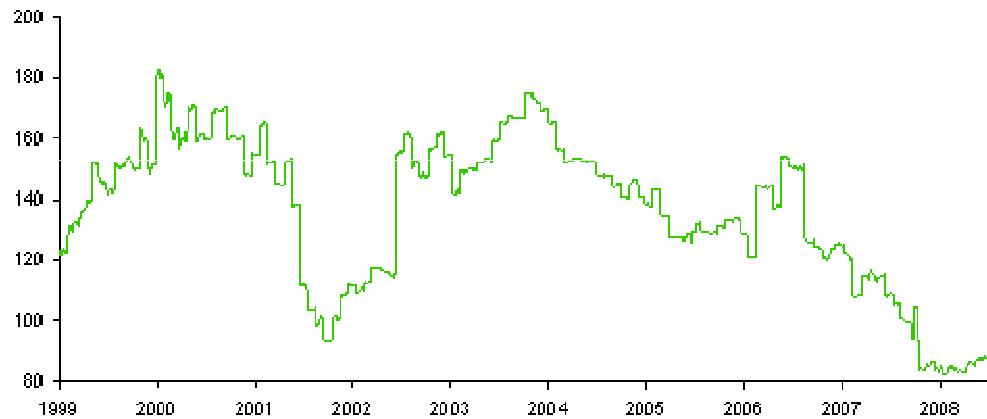


1yr forward CO2 allowances

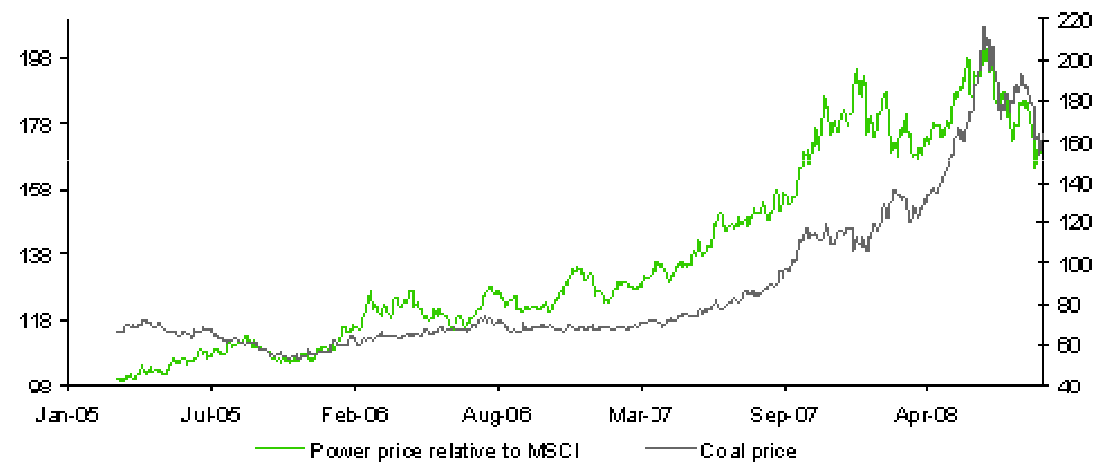


Utilities sector performance

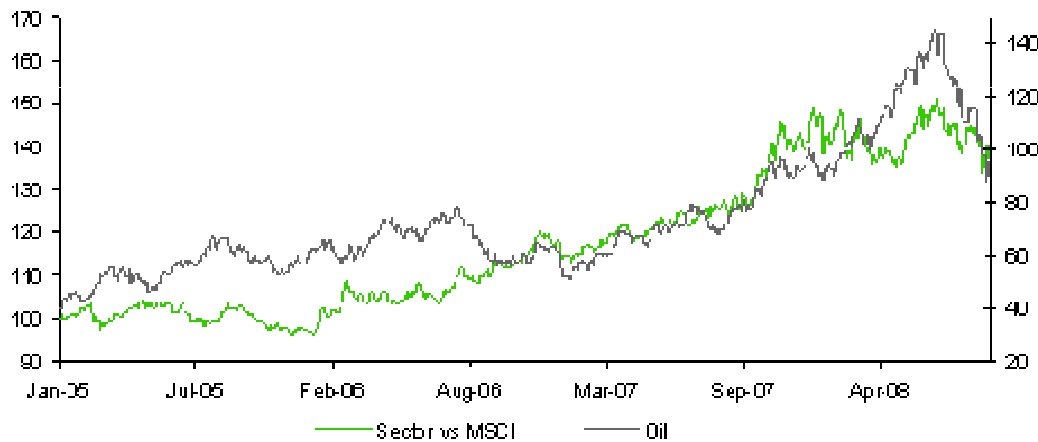
Long-term dividend yield relative (100 = market yield)



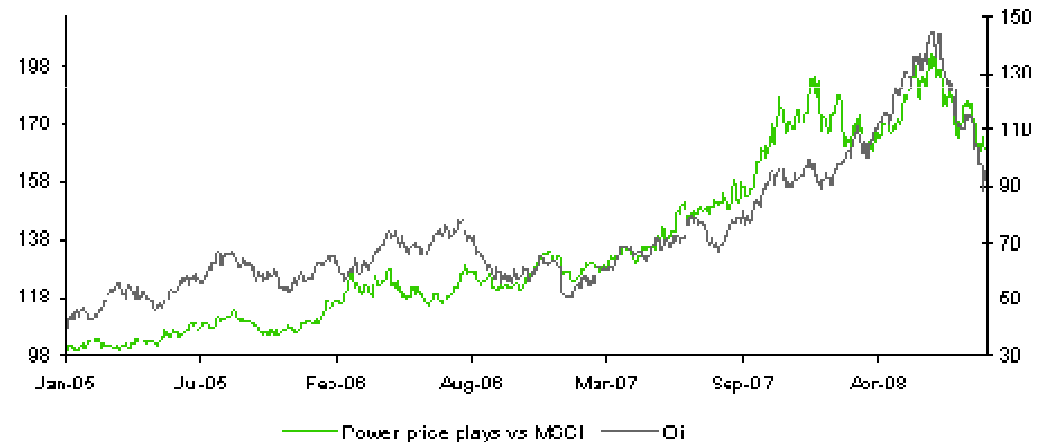
Power price plays' relative performance versus coal price



Utilities sector performance versus oil price



Power price plays' performance versus oil price

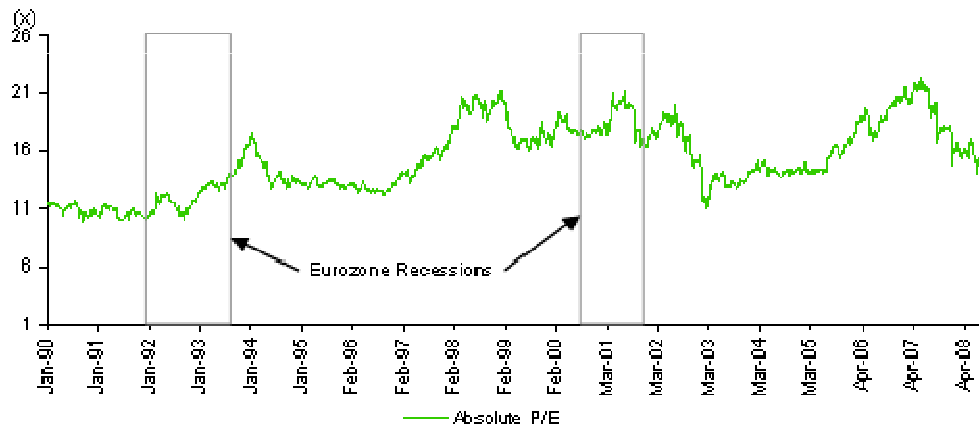


Recession, no longer an “if”, but “how long”

Recession scenario favours defensive earnings and secure income

- ▶ Utilities have historically performed better during periods of recession on absolute and relative basis – we believe this trend should continue
- ▶ Earnings to remain robust in the:
 - ▶ short term: given 2008/09 forward hedging already in place
 - ▶ Medium/longer term: capacity ‘crunch’ to support power prices

Absolute utility P/E & Eurozone Recessions



Utility P/E relative & Eurozone Recessions



Commodity forward hedging to protect 2009 earnings

Forward hedging makes utilities earnings defensive

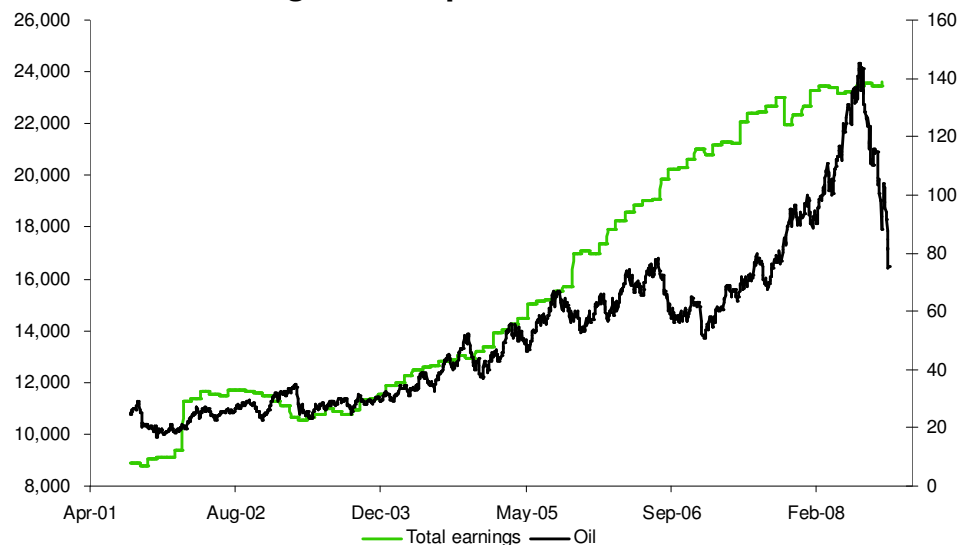
- ▶ For the power price plays in the sector, forward selling of power for 2009 provides added visibility and certainty to sector earnings.
- ▶ Sector 2009 forward sales at 40-80%

Forward hedging positions for commodity price plays

	2007 Avg. achieved	Forward sales (Aug '08)				Baseload forwards (Sep '08)	
		2008	2009	2010		2009	2010
Czech Republic	€/MWh					€/MWh	€/MWh
CEZ	47	95%	65%	30%	Czech	81	79
Finland	€/MWh					€/MWh	€/MWh
Fortum	40	70%	45%	--	Nord Pool	64	60
France	€/MWh					€/MWh	€/MWh
EDF	34				France	89	83
GDF-Suez	48	95%	80%	40%	Belgium	91	85
Germany	€/MWh					€/MWh	€/MWh
E.ON	52	95%	65%	35%	Germany	82	79
RWE	47	90%	65%	40%			
Italy	€/MWh					€/MWh	€/MWh
Edison	91	90%	40%	10%	Italy	90	90
Enel	71	75%	50%	25%			
Portugal	€/MWh					€/MWh	€/MWh
EDP	52	NM	NM	NM	Portugal	67	67
Spain	€/MWh					€/MWh	€/MWh
Endesa	43	70%	40%	20%	Spain	67	67
Gas Natural	41	70%	40%	20%			
Iberdrola	41	70%	40%	20%			
Union Fenosa	46	70%	40%	20%			
UK Energy	£/MWh					£/MWh	£/MWh
British Energy	41	85%	61%		UK	95	91
Drax	45	90%	72%	68%			

Commodity prices sensitivities

Utilities earnings vs. oil price



Utilities earnings sensitivities to commodity prices

POWER EPS impact of a €1/MWh increase in the power price only

British Energy	9.3%
EDF	6.8%
Drax	4.5%
RWE	3.7%
Enel	3.2%
Suez	3.1%
Fortum	3.0%
Iberdrola	2.9%
CEZ	2.5%
E.ON	2.0%

CO2 EPS impact of a €10/tonne increase in the CO2 price - considers both cost and benefit from higher power prices

	Phase II	Phase III
EDF	59.1%	57.1%
British Energy	27.1%	21.7%
Suez	25.4%	20.4%
Fortum	24.5%	21.0%
CEZ	22.4%	8.1%
RWE	15.0%	(4.0%)
E.ON	12.2%	7.5%
Enel	6.5%	(1.7%)
Iberdrola	4.0%	(1.4%)
Drax	(5.2%)	(25.0%)

COAL EPS impact of a \$10/t movement in coal - considers both cost and benefit from higher power prices

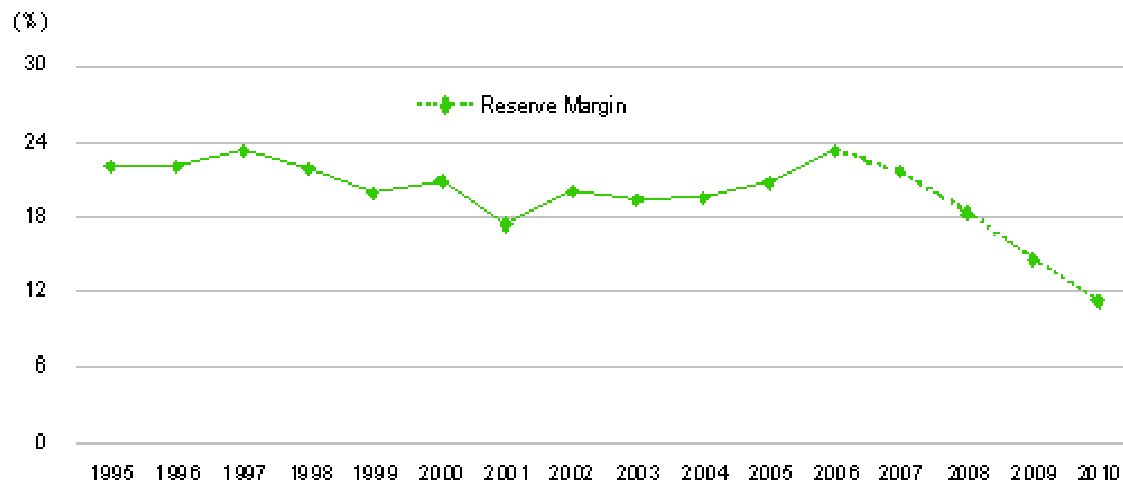
EDF	72.9%
Suez	13.0%
Fortum	10.2%
E.ON	4.8%
RWE	4.6%
CEZ	4.5%
Iberdrola	-0.4%
Enel	-0.4%
British Energy	-4.7%
Drax	-17.9%

Capacity crunch?

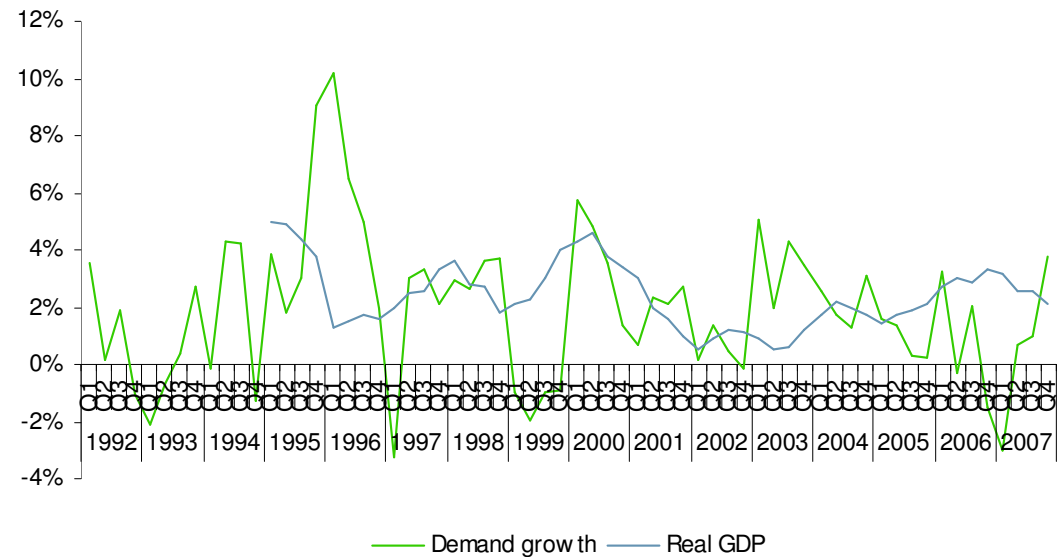
Medium / long term capacity restriction to support European power prices

- ▶ European reserve margins appear tight over the next few years, should support medium / long term power prices
- ▶ We see limited correlation between GDP growth and demand growth (correlation of 0.0006)

European reserve margins



Demand destruction?



Debt market conditions

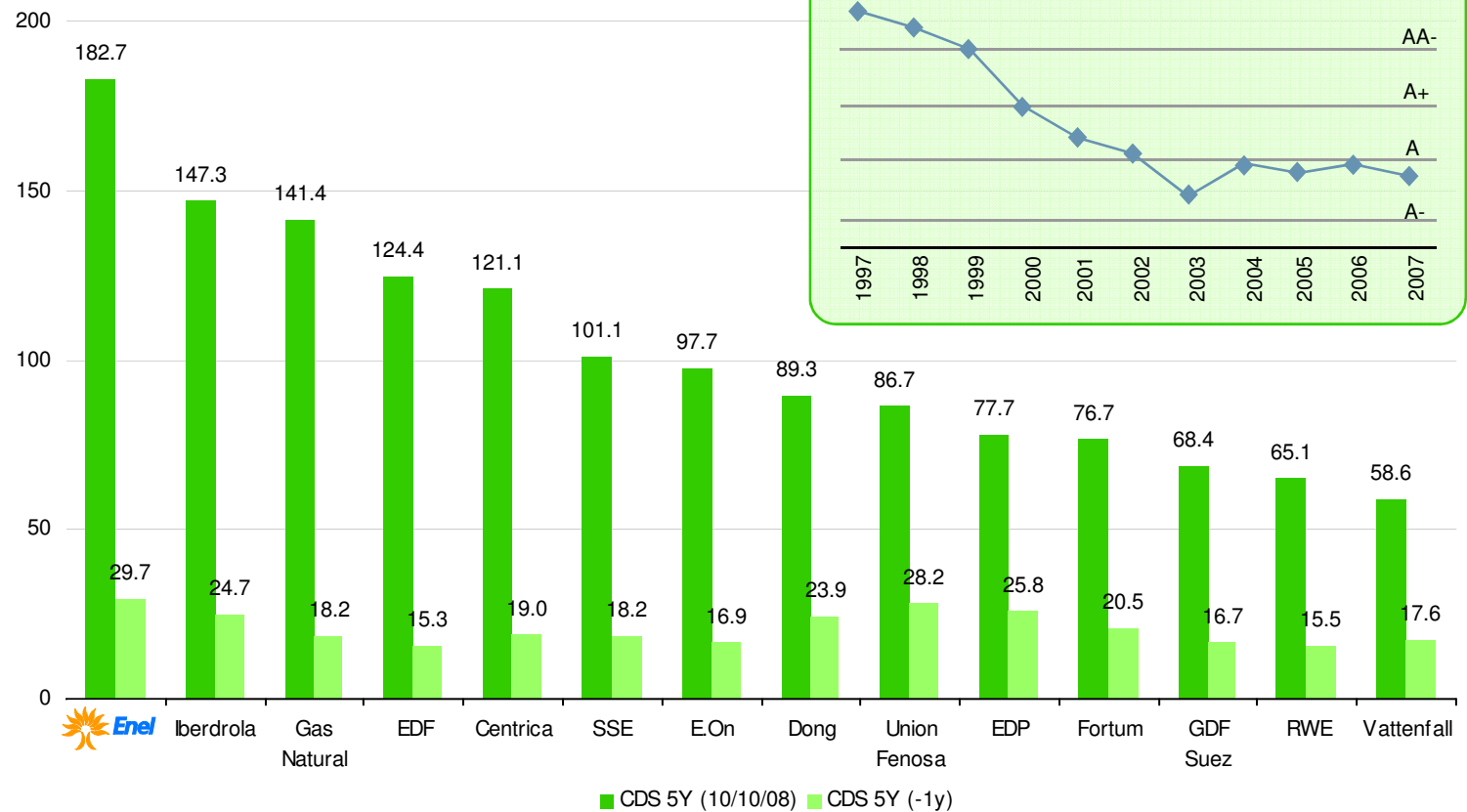
Utilities financing concerns not justified

	2009 Net debt/EBITDA (x)	2009 net financial debt (€m)	2009 gross financial debt (F) (€m)	Stated fin. net debt debt H1 2008 (A) (€m)	Stated financial debt H1 2008 (A) (€m)	Fixed /floating (%)	Due by end 2009 (€m)		S&P	Moody's	Outlook
							(%)	(%)			
Czech Republic											
CEZ	0.7x	2,574	3,354	3,019	3,391	92/8	316	9%	A-	n/a	Stable
Finland											
Fortum	2.2x	6,648	7,085	6,254	7,501	33/67	909	12%	A-	A2	Stable
France											
EDF	1.5x	27,441	40,125	18,191	30,091	82/18	9,340	31%	AA-	Aa1	Stable
GDF-Suez	1.2x	20,225	28,872	18,000	27,000	52/48	10,000	37%	A	Aa3	Positive (S&P)/stable (Moody's)
Suez Environment	2.4x	5,308	6,968	5,388	6,991	51/49	1,199	17%	N/A	N/A	N/A
Veolia Environment	3.5x	17,727	20,843	16,300	18,891	60/40	300	2%	BBB+	A3	Stable
Germany											
E.ON	2.8x	29,498	43,468	23,618	34,522	90/10*	4,200	12%	A	A2	Stable
RWE	2.3x	1,603	14,183	2,048	13,436	88/12	500	4%	A	A1	Negative
Italy											
A2A	3.9x	4,716	6,018	3,339	3,456	69/31	250	7%	BBB	-	Stable
Edison	2.1x	3,742	4,446	2,708	3,081	60/40	850	28%	BBB+	BBB2	Stable
Enel	3.3x	45,541	49,786	51,291	55,092	50/50	5,751	10%	A-	A2	Negative
Hera	2.1x	1,381	1,385	1,480	1,674	90/10	220	13%	A	A1	Negative S&P/Stable Moody's
Iride	3.4x	1,520	1,569	1,314	1,735	46/54	650	37%	-	-	-
Snam Rete Gas	4.0x	6,463	6,563	6,046	6,066	55/45	1,246	21%	NA	NA	(*) Uses ENI's credit rating
Terna	3.4x	3,632	3,660	2,985	3,108	41/59	144	5%	AA-	A1	Negative/Stable
Portugal											
EDP	3.7x	12,002	13,007	12,028	13,395	31/69	3,215	24%	A-	A2	Stable/Negative
EDP Renovaveis	4.6x	3,226	3,704	70	881	nm	0	nm	NA	NA	(*) Uses EDP's credit rating
Spain											
Enagas	3.5x	2,806	2,861	2,017	2,030	30/70	252	12%	AA-	A2	Stable
Endesa	na	na	na	12,560	13,610		2,722	20%	A-	A3	Negative
Gas Natural (pre-UNF deal)	1.5x	4,036	4,281	2,969	3,809	42/58	1,743	46%	A	A3	Negative Watch
Iberdrola	3.0x	23,221	27,519	18,542	23,009	62/38	3,450	15%	A-	A3	Stable
Iberdrola Renovables	2.2x	3,564	5,089	1,950	2,193	20/80	2,193	100%	NA	NA	(*) Uses Iberdrola's credit rating
Red Electrica	3.9x	3,268	3,295	2,841	3,045	73/27	73	2%	AA-	A2	Stable
Union Fenosa	2.4x	5,708	6,208	5,521	6,223	56/44	1,688	27%	NR	A3	Negative Watch
	(x)	(€m)	(€m)	(€m)	(€m)	(%)	(€m)	(%)			
UK Energy											
Centrica	0.5x	1,505	2,805	274	2,035	72/18	300	0%	A	A3	neg / stable
Drax	0.4x	173	267	287	381	--	0	0%	n/r	n/r	
International Power	3.6x	4,659	6,145	4,934	6,420	71/29	150	3%	BB-	Ba3	stable
National Grid	4.5x	18,480	21,842	17,641	21,003	55/45	1,585	9%	A-	Baa1	stable / neg
Scottish & Southern Energy	2.8x	5,033	5,296	3,666	3,929	64/36	1,500	38%	A	A2	stable
UK Water											
Northumbrian	5.5x	2,753	3,093	2,701	3,093	82/18	170	5%	BBB+	Baa1	Stable
Pennon	4.9x	2,594	2,652	2,215	2,652	65/35	329	12%	n/a	n/a	n/a
Severn Trent	5.1x	5,142	5,134	4,312	5,134	100/0	866	17%	A-	A3	Stable
United Utilities	4.5x	6,033	5,834	3,588	8 5,834	76/24	1,250	21%	A-	A3	Stable

Debt market conditions

Five-year Credit Default Swap (CDS) Spreads in bps (Oct 14 vs. -1y)

- ▶ The recent turmoil in global credit markets is even effecting utilities, traditionally seen as an ultra-safe credit risk
- ▶ Increasingly de-regulated businesses models and volatility in commodity prices are contributing to the perception of enhanced risks
- ▶ The comparative attractiveness of the sector is, however, little changed as other sectors have seen their CDS spreads widen even further



Utilities now face difficulties and increased costs in refinancing

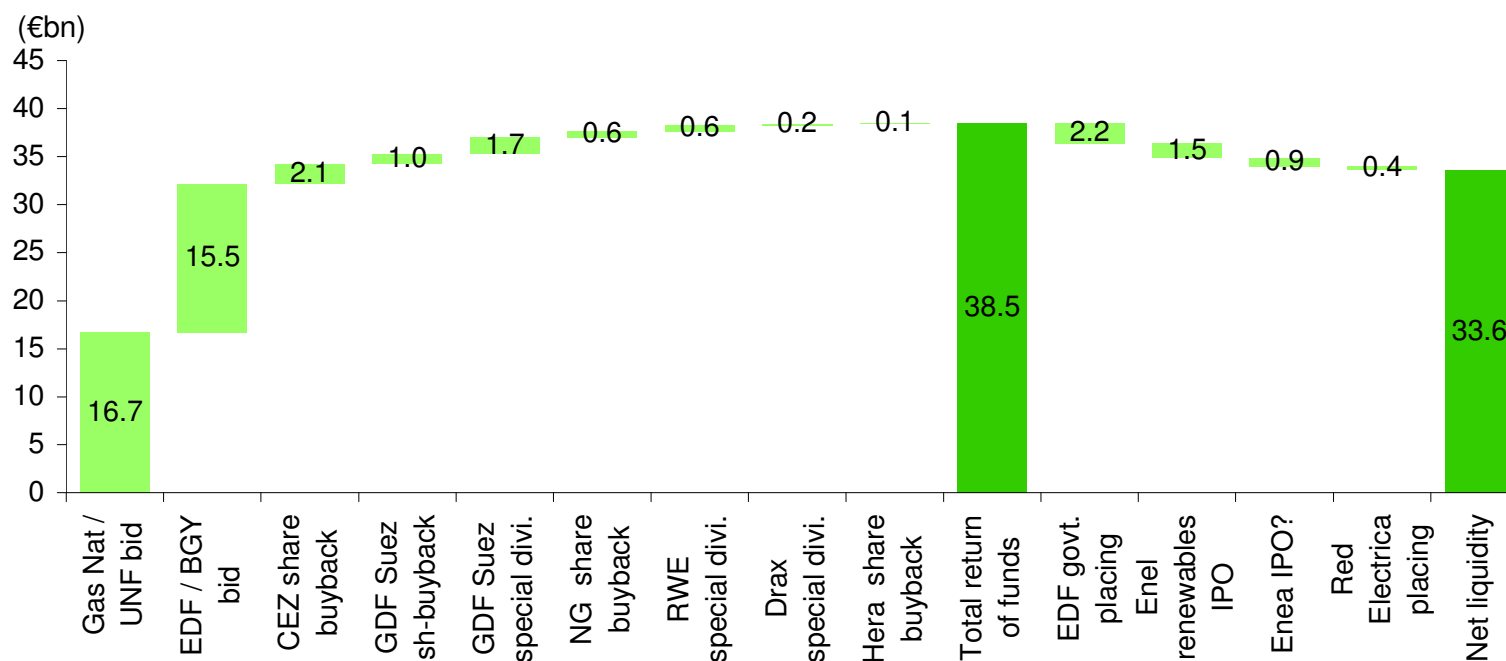
Source: Bloomberg, Standard and Poor's

Sector liquidity in 2009

Return of cash to shareholders to more than offset possible drain of funds in 2009

- ▶ **Use of funds:** takeover of Gas Natural for Union Fenosa; takeover of EDF for British Energy and Share buyback and/or special dividends for CEZ, GDF Suez, National Grid, RWE, Drax and Hera
- ▶ **Possible drain of funds:** French government placing in EDF, Enel Renewables IPO, Enea IPO, Red Electrica placing, Dong?

We see up to €38.5bn cash to be returned to shareholders in 2009



Restructuring

Likely deals

- ▶ **Gas Natural/Union Fenosa:** the announced €16.8bn deal should close by April 2009 (€18.33/share offer price for UNF)
- ▶ **EDF/British Energy:** the announced €15.5bn deal should close by mid-January 2009 (774p/share or 700p+CVRs)
- ▶ **ACS/Iberdrola:** having sold its 45.3% stake in UNF, ACS has made it clear where its heart is.
- ▶ **Endesa break-up:** technically, exercise of Acciona put option for 25% stake in Endesa not allowed before March 2010 and break up not allowed before March 2012. But possible this break-up could come early.

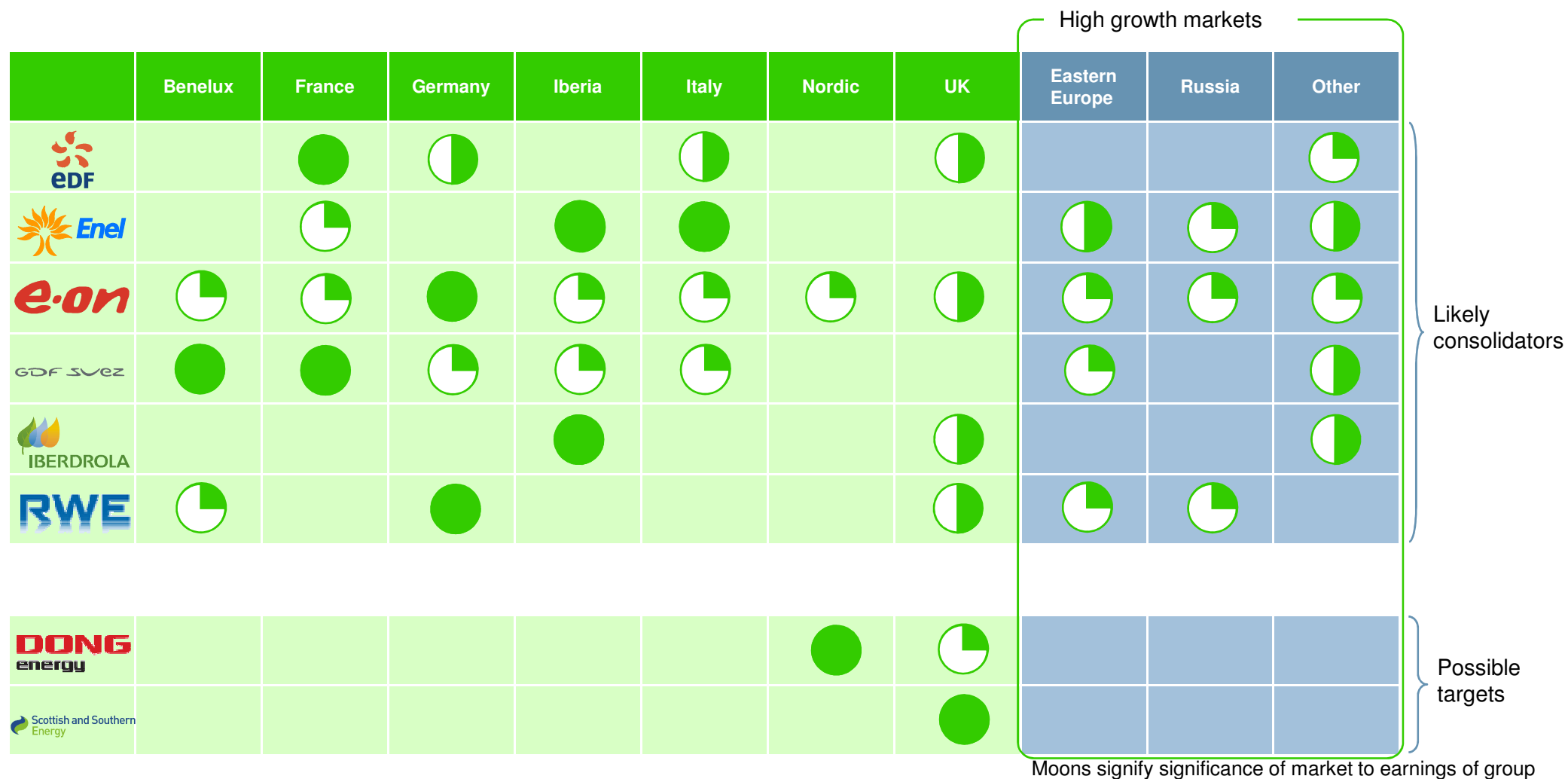
Unlikely deals

- ▶ **SSE/Vattenfall:** Vattenfall's long term goal of having 10% European energy market share sounds logical in the long term, but unlikely in the short term as it would need equity financing or disposal of assets first.
- ▶ **UK water:** given the higher cost of debt & lower investor risk appetite, further LBO in the sector seems unlikely

Possible deals

- ▶ **EDF:** having decided not to pursue a bid with KKR and TPG, EDF still has c.€11bn of firepower post BGY
- ▶ **GDF Suez:** has c.€32bn of firepower, historically linked with interest in Repsol, International Power and Spanish utilities
- ▶ **Centrica/SPE/EDF:** EDF wants Centrica's 51% stake in SPE, Centrica could buy 25% stake in BGY (we believe Centrica could face Competition Commission issues)
- ▶ **Suez Environnement/Agbar/Valoriza:** if LaCaixa decide to focus on energy, Suez Environnement could be interested to buy LaCaixa's stake in Agbar.
- ▶ **E.ON:** likely to focus on disposals with related assets in the US, German HV grid and 3.5% in Gazprom
- ▶ **RWE:** small and medium sized acquisitions in Poland, the Netherlands and eastern Europe
- ▶ **Viridian:** Arcapita put Energia up for sale, €11.5bn, SSE / Endesa interest?

Large positions in selected markets



Geographical diversification is necessary in order to gain the scale investors prize (and avoid becoming a target)

Main Commodity Assumptions

<u>Real</u>		current	2009	2010	2011	2012	2013	2014
Oil	\$/bbl	104	80	80	80	80	80	80
Coal	\$/tonne	179	150	130	125	120	115	110
CO2	€/tonne	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Russian gas at German border	€/MWh	35.3	28.7	21.2	21.2	21.2	21.2	21.2
Central European elec	€/MWh	81.2	78.0	68.3	66.9	65.6	65.0	65.0
UK gas premium	p/therm	11.1	15.0	10.0	5.0	5.0	5.0	5.0
UK gas	p/therm	93.0	81.6	59.1	54.1	54.1	54.1	54.1
UK elec	£/MWh	87.0	73.4	56.2	52.4	52.4	52.4	52.4
<u>Nominal</u>		current	2009	2010	2011	2012	2013	2014
inflation (Eurozone)				2.0%	2.0%	2.0%	2.0%	2.0%
Price index			1.00	1.02	1.04	1.06	1.08	1.10
Oil	\$/bbl		80.0	81.6	83.2	84.9	86.6	88.3
Coal	\$/tonne		150.0	132.6	130.1	127.3	124.5	121.4
CO2	€/tonne		25.5	26.0	26.5	27.1	27.6	28.2
Russian gas at German border	€/MWh		28.7	21.6	22.0	22.5	22.9	23.4
Central European elec	€/MWh		78.0	69.6	69.6	69.6	70.4	71.8
UK gas premium	p/therm		15.0	10.2	5.2	5.3	5.4	5.5
UK gas	p/therm		81.6	60.3	56.3	57.4	58.6	59.8
UK elec	£/MWh		73.4	57.3	54.5	55.6	56.7	57.8