

The market and its double message

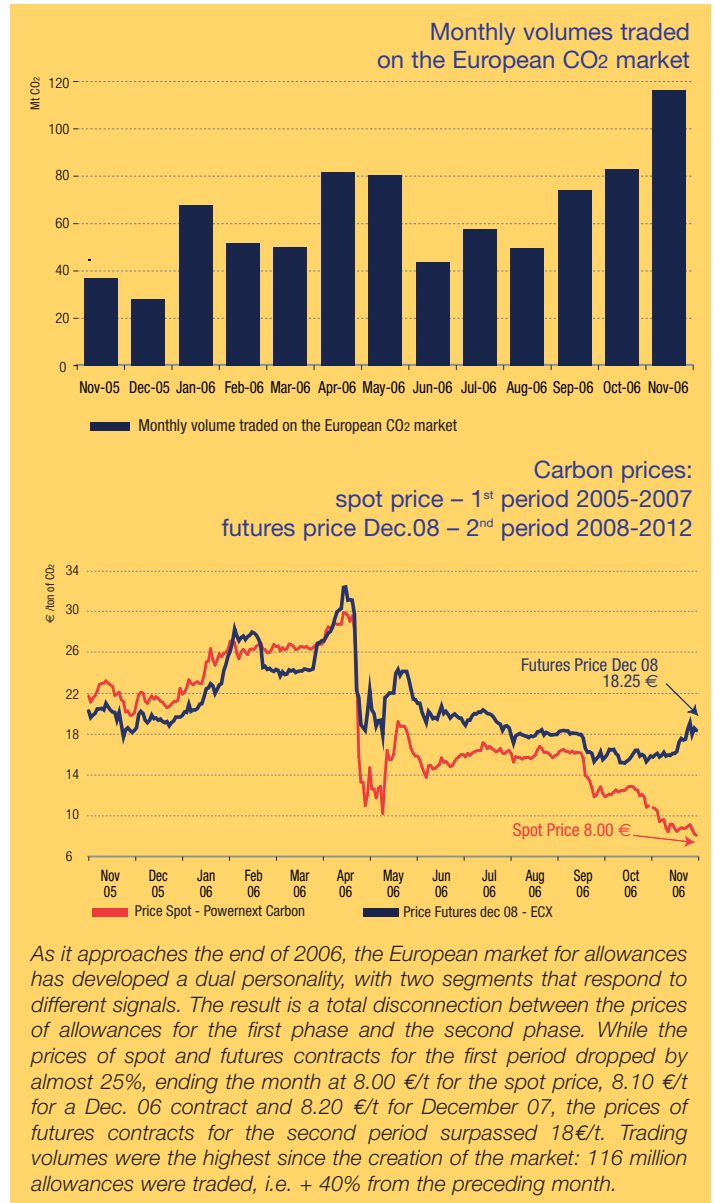
The total disconnection between the prices for the first period (2005-2007) and the second period (2008-2012) described in previous issues has become a fixture. The European Union Emissions Trading Scheme is now sending two price signals responding to different dynamics.

The decline in the first period price has undoubtedly been accelerated by the particularly warm and wet autumn, which reduces the energy sector's need for allowances. On a more basic level, the operators now think more likely the scenario of an overall long situation, in which the total volume of the allowances available exceeds actual emissions for the period 2005-2007. The result has been a wave of selling, resulting in a record number of trades and a decline in the price.

On the other hand, the allowance price of the second period increased to levels approaching 20 euros. This rise was primarily the result of institutional factors: The European Commission issued its opinion on ten National Allowances Plans for the second period in late November. In so doing, it established the basis for the institutional framework for 2008-2012 and gave indications regarding three factors that will have a determining effect on the allowance price:

- The Commission has requested that the allowances awarded to installations be reduced. This effort, which corresponds to a 7% reduction overall from the levels proposed by the States, is directed particularly at Germany (- 29 Mt) and the new EU member states (- 23 Mt for Slovakia, Lithuania and Latvia). The Commission also reaffirmed its rejection of ex-post allowances based on adjusted projections of growth and emissions. Brussels has therefore sent a clear signal of the scarcity of the allowances that will be available in 2008-2012.
- The possible carry-over of unused allowances from the first to the second period ("banking") is now subject to conditions that are so restrictive as to make it practically impossible. Only France and Poland utilized this option, which could have brought some flexibility to the system by preventing an excessive drop in prices in 2007 in case of a long overall market. Nevertheless, banking between the second and subsequent periods is still permitted, which could further increase the scarcity of allowances in 2008-2012.
- The use of credits originating from the project mechanisms created by the Kyoto Protocol (JI and CDM) has been significantly restricted. Ireland has thus been forced to reduce its ceiling from 50 to 21%, which corresponds to 35 MtCO₂ less over the period; Sweden will have to reduce its own ceiling from 20 to 10%, i.e. 11 Mt CO₂ less than planned.

These three factors may foreshadow a greater scarcity of allowances for the second period, which has already been taken into account by the market players in the form of a price increase.



It remains to be seen how the different countries will now respond to the demands of the Commission. Some of them have certainly not ruled out the possibility of new appeals on the grounds that the European authority is changing the rules in the middle of the game.

Which of the two price signals is more important? The first period has been a learning experience, and few players are expecting a major rebound in this market. On the other hand, the period 2008-2012 is still open. All eyes are therefore fixed on the price of the allowances for the second period, pending the allocation decisions by the other countries.

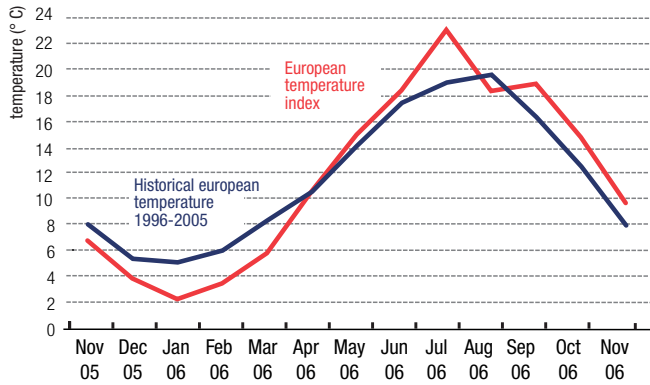
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European temperature index (°C)

Average of Powernext Weather indices* – France, Germany, UK and Spain – weighted by the allowances allocated to each country.

	October	November
Monthly average (°C) - 2006	14.6	9.5
Monthly average (°C) - 1996-2005	12.4	7.8
Monthly maximum (°C) - 2006	12.6	5.7
Monthly minimum (°C) - 2006	17.8	13.0

Source: Climate Task Force - Caisse des Dépôts

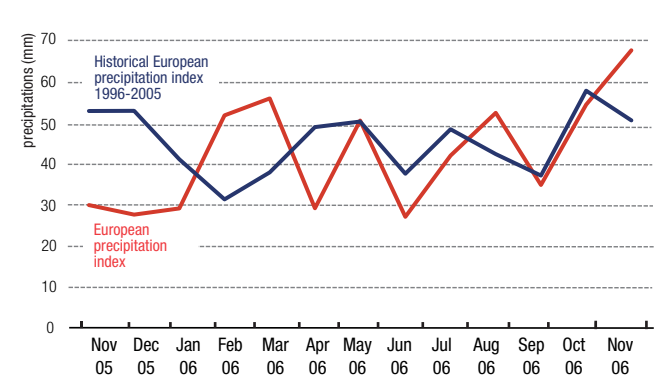


European precipitation index (mm)

Average of precipitation indices for Paris, Berlin, London and Madrid, weighted by the hydroelectric share in each country's electric power mix.

	October	November
Monthly precipitation - 2006	54.0	67.2
Monthly precipitation - 1996-2005	57.4	50.1
Cumulative over 12 months	480.1	517.7
Cumulative over 12 months 1996-2005	533.6	531.4

Source: Climate Task Force - Caisse des Dépôts



Warm and wet: In November, our European temperature index remained almost two degrees above its ten-year average and our precipitation index was well above seasonal norms. The European rainfall situation seems to be improving. On average, precipitation in Europe was higher than in the previous month. At the beginning of December reservoirs in Spain were at 54.7% of total capacity, at a level that was 5.9 TWh higher than in 2005. Reservoirs in France are above 80%, a relatively satisfactory level for this time of year. Hydrological conditions in Scandinavian countries continue to improve; reservoirs are 65.5% full and the deficit compared to their 2005 levels was down to 21 TWh at the end of the month. These meteorological conditions had a moderating impact on the allowances required by electric power producers for the month of November.

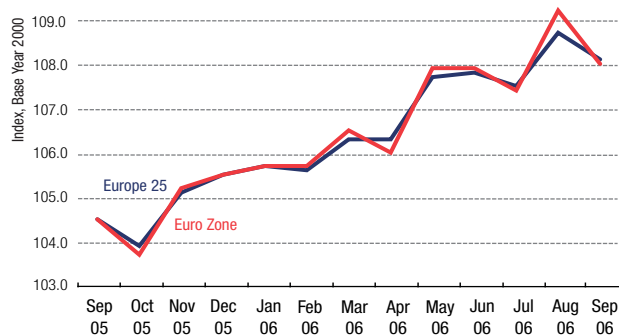
* The Powernext Weather indexes are defined on the basis of average temperatures, weighted by the population of the representative regions that make up each country.

European industry production index

Index of production of all industries, excluding construction (Base Year 2000)

	September index 2006	Monthly variation (%)	Variation/12 months (%)
Europe 25	108,1	- 0,6	+ 3,3
Zone euro	108,0	- 1,0	+ 3,3

Source: Eurostat

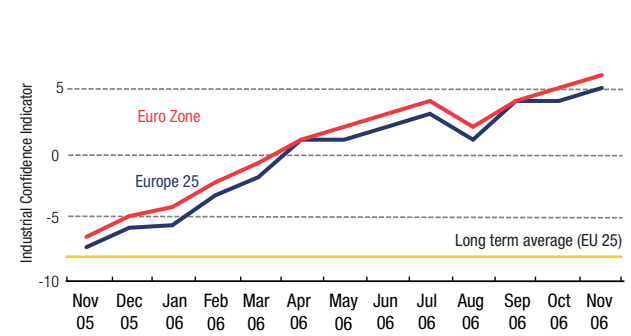


Opinion of Business Leaders

Industrial Confidence Indicator
Balance of responses (difference from the long-term average)

	October 2006	November 2006
Europe 25	4	5
Zone euro	5	6

Source: Eurostat



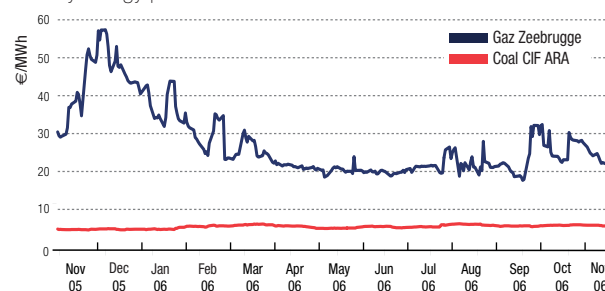
In September, European industrial production declined from the previous month by an average of 1.0% in the Euro zone and 0.6% in the EU of 25. Among the countries that hold almost 70% of the allowances, industrial production has increased in Poland (+2.2%) and the UK (+0.2%), while it has dropped in Germany (-0.4%), Spain (-0.6%), France (-0.9%) and Italy (1.0%). In the same period, overall industrial orders declined by an average of 1.3% in the Euro zone and 1.0% in the EU of 25, while they grew up 7.8% in Poland and 2.5% in France. Nevertheless, in November the European industrial confidence index remained optimistic and was up one point in the Euro zone and the EU of 25. The rise in the industrial confidence index was significant in Germany (+2), Poland (+2) and the UK (+6), although the index was down in Italy (-1) and remained unchanged in Spain and France.

Energy prices

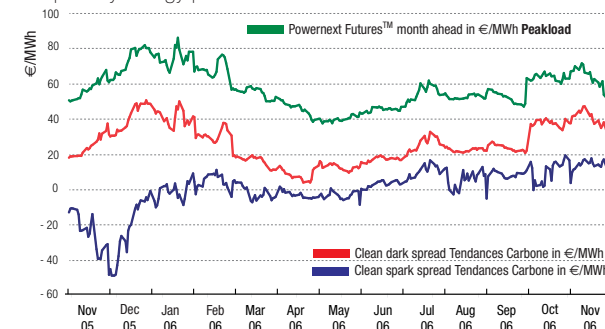
	October 2006	November 2006	
Average closing price			
Brent, 1 st maturity, in \$/baril	59.84 \$/B	59.86 \$/B	
Natural Gas Zeebrugge Month Ahead	7.59 €/MMBTU	7.05 €/MMBTU	
Amsterdam coal CIF ARA Month Ahead	51.96 €/t	52.66 €/t	
Powernext Futures™ month ahead	Base	63.42 €/MWh	63.11 €/MWh
	Peak	91.18 €/MWh	95.79 €/MWh
Powernext carbon spot price	12.13 €/t	9.04 €/t	
Clean spark spread	11.94 €/MWh	15.53 €/MWh	
Clean dark spread	37.06 €/MWh	38.57 €/MWh	
CO ₂ switch price coal/gas	62.87 €/t	55.66 €/t	

Source: Reuters, Powernext, Climate Task Force - Caisse des Dépôts

Primary energy prices



Price of electricity and price difference between electricity and primary energy prices



In November, raw materials prices were particularly stable in terms of the monthly average, while the prices of electricity and natural gas experienced a marked dip in the final days of the month. Compared to the previous month, ICE Brent closed +0.03%, CIF ARA coal at 1.35% and the base price of electricity on Powernext Futures™ -0.49%, while the price of natural gas at Zeebrugge declined by 7%. In terms of providing an incentive to switch from one source of energy to another, the continued decline of the allowance price on Powernext Carbon naturally led to an increase in the *clean spark* and *dark spreads* that shows a gross operating profit for coal-fired power plants that is three times higher than for gas-fired power plants. The Tendances Carbone switch price remains above 50 €/t, which is a long way from a level that would encourage electric power producers and industrial operators to modify their energy mix. In the context of warm and wet weather conditions and reduced uncertainties regarding to the actual positions of the various players, the impact of the relative prices of fuels on the allowance price seems to have been less pronounced this month.

European Union: NAP II submitted to the European Commission on 1 October 2006

Member States	NAP I			NAP II			Difference between the approved NAP II allowance and verified 2005 emissions Mt CO ₂
	Allowances 2005-2007 Mt CO ₂ (including reserves)	National share in the EU ETS	Verified 2005 emissions Mt CO ₂	Proposed allowances Mt CO ₂	Approved allowances Mt CO ₂	Reduction of allowances Mt CO ₂	
Germany	499.0	23.2%	474.0	482.0	453.1	- 28.9	- 20.9
Greece	74.4	3.5%	71.3	75.5	69.1	- 6.4	- 2.2
Ireland	22.3	1.0%	22.4	22.6	21.2	- 1.5	- 1.3
Latvia	4.6	0.2%	2.9	7.7	3.3	- 4.4	0.4
Lithuania	12.3	0.6%	6.6	16.6	8.8	- 7.8	2.2
Luxembourg	3.4	0.2%	2.6	4.0	2.7	- 1.3	0.1
Malta	2.9	0.1%	2.0	3.0	2.1	- 0.9	0.1
United Kingdom	245.3	10.3%	242.4	246.2	246.2	0.0	3.8
Slovakia	30.5	1.4%	25.2	41.3	30.9	- 10.4	5.7
Sweden	22.9	1.1%	19.3	25.2	22.8	- 2.4	3.5
TOTAL	917.6	41.6%	868.7	924	860.1	- 63.9	- 8.6

These comparisons between NAP I and NAP II do not take changes in the perimeter into account: Germany has added new installations amounting to 11 Mt, as have Lithuania (0.05 Mt), Slovakia (1.7 Mt), Sweden (2 Mt) and the United Kingdom (0.5 Mt). The reserves for the new entrants have also been modified. The verified emissions of the United Kingdom do not include installations that were not included in 2005 but that will be included in 2008, the emissions from which are estimated at 30 Mt.

The European Commission approved 10 Member States NAP II on 29 November 2006, subject to technical modifications: Germany, Greece, Ireland, Latvia, Lithuania, Luxembourg, Malta, the United Kingdom, Slovakia and Sweden. The plans were analyzed on the basis of twelve criteria listed in the directive, including the compatibility of the allowances with the Kyoto commitments, the projected trend of emissions and the potential for reduction. Ultimately, the total quantity of allowances awarded to these 10 Member States was 860.1 Mt CO₂, of which 52.7% went to Germany and 28.6% to the United Kingdom. The Commission demanded an average reduction of 7% of the allowances awarded compared to the quantity proposed by these 10 States for the period 2008-2012, i.e. a volume of 63.9 Mt. The utilization of credits originating from CDM and JI projects was restricted for Ireland and Sweden to 21.9% and 10% respectively. The only plan accepted without modifications was the one submitted by the United Kingdom. The European Commission still waited 8 NAP II from Austria, Bulgaria, Czech Republic, Denmark, Italy, Hungary, Spain and Romania.

Dashboard

CO2 Markets

			Nov-05	Dec-05	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	
Spot market (Powernext carbon)	Average closing price in €	Low price traded	19.70	19.80	21.77	25.25	26.00	13.19	10.14	13.65	15.65	15.15	11.78	10.75	8.00	
		Average price traded	21.59	21.11	23.92	26.19	26.37	26.71	14.81	14.99	16.24	15.88	14.83	12.13	9.04	
		High price traded	23.20	22.40	26.50	26.97	26.68	29.75	19.1	16	17.05	16.68	16.40	12.78	10.71	
	Volume in kt	Daily average	36	65	89	84	100	116	143	77	93	91	87	154	203	
		Total monthly	730	1,361	1,966	1,687	2,307	2,084	2,720	1,619	1,853	1,904	1,834	3,389	4,270	
Futures Market (ECX)	Dec 2006	Average closing price in €	Low price traded	19.70	20.35	22.30	26.15	26.70	13.55	9.30	14.00	16.00	15.30	12.00	10.80	8.10
			Average price traded	21.57	21.66	24.70	26.88	27.07	27.18	15.09	15.31	16.53	16.13	15.05	12.26	9.14
			High price traded	23.10	22.80	27.10	27.95	27.50	30.45	19.65	16.30	17.35	17.00	16.70	12.90	11.00
	Dec 2007	Average closing price in €	Low price traded	19.90	20.55	22.75	27.15	27.60	14.25	9.80	14.60	16.65	15.90	12.35	11.05	8.20
			Average price traded	21.65	22.07	25.34	27.80	28.03	28.14	15.73	15.95	17.15	16.71	15.50	12.51	9.38
			High price traded	23.15	22.90	27.55	28.85	28.45	31.50	20.45	17.05	18.05	17.60	17.15	13.15	11.25
	Dec 2008	Average closing price in €	Low price traded	18.05	18.25	19.70	24.20	23.55	18.80	17.80	19.00	18.25	17.00	15.20	15.05	15.65
			Average price traded	19.61	19.24	21.58	26.60	24.33	28.09	21.26	19.98	19.42	17.90	17.20	15.73	16.71
			High price traded	20.90	20.10	24.65	28.15	26.80	32.25	24.20	21.30	20.25	18.70	18.25	16.40	19.00
	Volume in kt	Daily average	876	615	1,649	1,332	971	2,286	2,426	1,003	1,375	1,199	1,820	2,324	2,969	
		Total monthly	18,735	12,308	33,991	26,638	22,331	41,146	53,381	22,073	27,503	25,177	38,212	51,124	65,325	
	Total european market volume in kt (PointCarbon)			37,093	27,900	67,851	51,598	50,167	81,881	80,605	43,852	57,813	49,536	73,926	82,832	116,498

Source: Powernext Carbon, ECX, PointCarbon

Climate

> Temperatures (°C)	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06
Germany - monthly average	5.0	1.4	-1.6	0.6	2.6	9.1	14.1	17.6	23.1	16.9	18.1	13.3	7.9
Germany - difference monthly and decennial average	-0.1	-0.3	-2.7	-2.1	-3.1	-0.3	0.1	0.5	4.7	-2.3	3.3	3.0	2.8
Spain - monthly average	12.2	9.1	8.4	9.2	13.4	15.9	19.8	22.8	26.6	24.6	23.2	19.8	15.4
Spain - difference monthly and decennial average	-0.7	-1.3	-1.6	-1.5	0.1	1.0	1.8	0.3	2.4	-0.1	1.5	1.7	2.5
France - monthly average	7.3	3.4	3.4	3.8	7.4	11.3	15.4	19.4	24.3	18.6	19.6	15.9	10.6
France - difference monthly and decennial average	-0.6	-1.9	-1.5	-2.0	-1.5	0.2	0.1	0.6	4.2	-2.3	2.5	2.5	2.7
UK - monthly average	6.1	4.5	4.4	4.0	4.9	8.5	12.0	15.5	19.2	15.9	16.3	12.6	8.0
UK - difference monthly and decennial average	-1.4	-0.6	-0.6	-1.6	-2.3	-0.5	-0.1	0.5	2.4	-1.5	1.5	1.4	0.5

Source: Powernext Weather

> Precipitations (mm)	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06
Berlin - monthly precipitation	21.8	49.5	20.4	43.8	33.5	12.8	62.5	13.2	57.2	60.1	14.1	25.5	40.0
Berlin - difference monthly and decennial precipitation	-15.3	9.6	-22.6	-1.3	-4.6	14.3	9.9	-34.6	-13.7	-1.6	-32.4	-24.0	4.4
Madrid - monthly precipitation	45.1	10.2	37.4	35.0	45.8	13.6	7.4	35.5	0.9	14.0	10.6	103.0	128.4
Madrid - difference monthly and decennial precipitation	-5.1	-34.9	5.6	8.2	15.6	-25.3	-32.1	22.4	-8.0	2.9	-10.2	56.0	78.7
Paris - monthly precipitation	25.2	25.8	28.8	62.2	68.8	31.0	60.4	28.8	56.2	65.6	48.0	40.6	46.4
Paris - difference monthly and decennial precipitation	-31.8	-34.0	-14.3	34.8	28.0	-28.4	6.0	-13.6	-2.7	16.7	8.1	-22.5	-7.4
London - monthly precipitation	29.8	45.4	16.4	40.4	37.0	27.8	99.8	10.2	23.4	64.0	75.2	65.2	94.8
London - difference monthly and decennial precipitation	-38.7	-8.4	-32.4	1.9	2.2	-20.9	58.7	-46.0	-12.7	13.3	31.1	-8.1	30.1

Source: WeatherOnline UK

Economic activity

	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06
Total industry production index (excluding construction and seasonally adjusted), base = 2000													
Europe 25	105.1	105.5	105.7	105.6	106.3	106.3	107.7	107.8	107.5	108.7	108.1	-	-
Euro zone	105.2	105.5	105.7	105.7	106.5	106.0	107.9	107.9	107.4	109.2	108.0	-	-
Industry confidence indicator													
Europe 25	-7	-6	-6	-3	-2	1	1	2	3	1	4	4	5
Euro zone	-7	-5	-4	-2	-1	1	2	3	4	2	4	5	6

Source: Eurostat

Energy prices

	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	
Brent crude oil, 1 st maturity, in \$/baril	56.23	57.63	63.86	61.14	63.03	70.54	70.98	69.78	74.26	73.90	63.64	59.84	59.86	
Natural gas Zeebrugge, 1 st maturity date, in €/BTU	11.26	13.44	10.41	8.32	7.25	6.09	5.80	5.63	5.90	6.37	5.81	7.59	7.05	
Coal CIF ARA, 1 st maturity date, in €/tonne	43.86	44.42	45.29	50.79	53.54	51.25	46.67	49.61	48.87	54.59	51.55	51.96	52.66	
Powernext Futures™ month ahead, in €/MWh	Base	56.40	72.00	74.94	68.76	54.83	46.11	39.29	44.87	54.21	52.26	51.62	63.42	63.11
	Peak	79.50	103.72	109.56	93.48	72.73	59.64	58.74	67.62	82.83	76.26	72.39	91.18	95.79
Difference in prices of electricity and of natural gas, corrected for the price of CO ₂ : Clean Spark spread in €/MWh	-21.57	-19.86	1.92	7.09	0.18	-1.30	-1.98	4.49	11.72	7.03	10.19	11.94	15.53	
Difference in prices of electricity and of coal, corrected for the price of CO ₂ : Clean Dark spread in €/MWh	24.12	39.77	40.73	30.15	15.63	7.45	12.25	16.74	25.27	21.91	23.11	37.06	38.57	
CO ₂ switch price coal/gas in €/tonne	113.96	141.54	102.33	72.78	57.58	44.58	43.72	39.75	43.63	45.90	40.93	62.87	55.66	

Source: Reuters, Powernext, Caisse des Dépôts

A methodological note can be downloaded at the following address: http://www.powernext.fr/modules/PwnDL/download/files/eng/Methodology_Tendances_Carbone_EN.pdf



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