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Tendances Carbone

Powernext carbon

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Editorial

Emissions Trading in the EU after 2012

What will the EU ETS look like ten years from now depends on a number of factors, including what lessons we – the European Commission, Member States and stakeholders – learn, or chose to learn from the pilot Phase and the emerging Phase II. Developments in the US will also shape the EU ETS.

In going from the pilot to the second Phase, we now know that we can set up a pan European trading scheme that is working – allowances were allocated, trades did take place, a market clearing price emerged and some abatement was achieved. However, it also generated substantial rents for some utilities and experienced a sharp price adjustment in April 2006. The evidence indicates we chose to learn two lessons for the Kyoto Phase: a stricter allowances allocation and an increased share of allowances auctioning.

From the European Commission review of the pilot Phase, provisional conclusions can be drawn for post-2012. The cap and trade scheme will probably continue over 2013 and its globalisation in link to others schemes is a core objective. Allocation will be tightened and perhaps centralised through an EU-wide cap; its auctioning share should expand. Some new entrants will have to buy allowances. Its scope will be extended to N_2O, carbon storage and process emissions but not to road transport. In terms of monitoring, there will be further harmonization and a strengthening of the rules for new entrant reserves, compliance and so on. Regarding projects, domestic offsets will be allowed, initially on a pilot basis and Forestry and Land Use will be parked pending outcome of UNFCCC negotiations.

In the US, the Low Carbon Economy Act, introduced on July 2007 by Senator Bingaman and Specter, gives further hints on the future of the EU ETS. It proposes an absolute cap covering the bulk of emissions from 2012 to 2030. The overall target is a 60% reduction from 2006 emissions by 2050. It shares or is inspired by some features of the EU ETS: unlimited banking and no borrowing, new entrants reserve, scheme review procedures, limited linkage to foreign schemes and use of allowance purchase requirement for imports from countries not ‘doing their bit’ – read mainly China –, a variation of the European ‘border tax adjustment’ discussion.

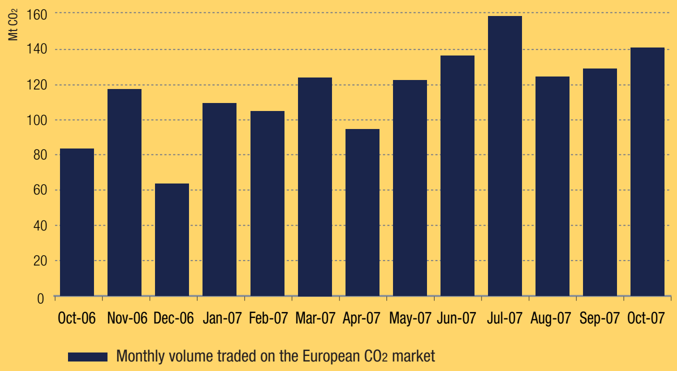
Still, the US scheme proposes entirely genuine features: a safety valve (price cap) initially set at $12/tonne in 2012 and increasing at 5% above inflation thereafter; a high proportion of allowances auctioned of which revenues will be placed in separate funds for technology development, adaptation and low-income assistance; the inclusion of sequestration in agriculture.

There is no guarantee that this US legislation will be enacted, but it has strong implications for the EU ETS after 2012. Some good ideas have travelled from Europe to the US: the significant auctioning share of the allowances, a period of review, and the potential for linkage. One bad idea from Europe – the new entrants reserve – has crossed the Atlantic.

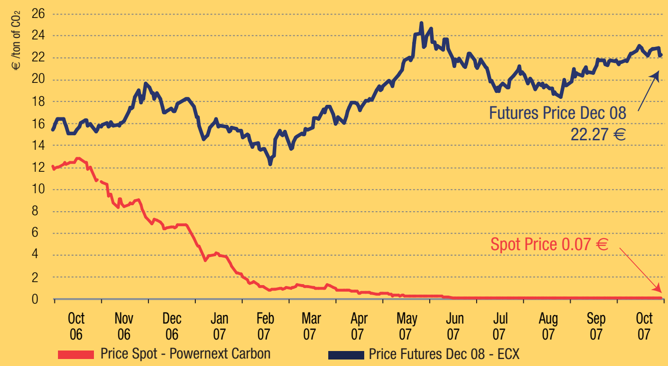
The US Bingaman and Specter proposal brings some powerful ideas to the table, notably the inclusivity of the scheme, the direct linkage of trading to stimulate alternative technologies and the potential requirement that allowances be purchased for imports from countries not taking comparable action. However, the use of a price cap is a bad idea. An EU ETS price of € 25-35 will be over 4 times the US ceiling, and if the latter is also adopted by China, then this can become a serious competitiveness issue for Europe.

Frank J. Convery – frank.convery@ucd.ie
Heritage Trust Professor of Environmental Policy, University College Dublin

Monthly volumes traded on the European CO_2 market



Carbon prices:
spot price – 1st period 2005-2007
futures price Dec.08 – 2nd period 2008-2012



For the third consecutive month, EUA trading volumes increased in October to 139.8 $MtCO_2$, i.e. 11.9 Mt higher than in September 2007 and 57.0 Mt higher than a year ago. It was the second-highest monthly trading volume in the history of the EU-ETS (after August 2007, when 157.7 Mt were traded). The volume traded related almost exclusively to Phase II.
The EUA price of the Phase I continues to slowly approach the sum of transaction costs and ended the month at 0.07 €/t. The EUA December 2008 contract closed at 22.27 €/t at the end of the month, i.e. an increase of 2.7% (+ 0.59 €/t) since September.

Source: Powernext Carbon, ECX, PointCarbon

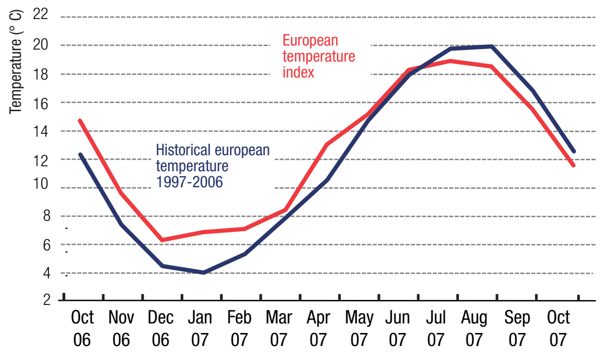
Climate

European temperature index (°C)

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

	September	October
Monthly average (°C) - 2007	15.4	11.4
Monthly average (°C) - 1997-2006	16.6	12.5
Monthly minimum (°C) - 2007	11.7	6.9
Monthly maximum (°C) - 2007	17.4	7.1

Source: Mission Climat - Caisse des Dépôts



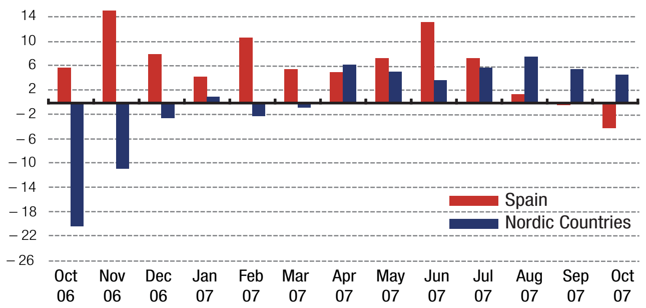
European precipitation index (mm)

• Average of precipitation indices for Lyon, Oslo, Turin, Vienna and Madrid, weighted by the hydroelectric share in each country's electric power mix.

	September	October
Monthly precipitation - 2007	76.8	35.6
Monthly precipitation - 1997-2006	71.8	84.6
Cumulative over 12 months	834.1	776.8
Cumulative over 12 months 1997-2006	742.8	744.1

Source: Météo-France

• Spread between the monthly rate of reservoir levels (%) and the ten-year average rate (%).



October was colder than usual. The European temperature remained one degree below the ten-year average. The same gap was observed in Germany. The difference was smaller in Spain (– 0.6°C) and in the United Kingdom (– 0.8°C) and slightly greater for France (– 1.3°C).
These cool temperatures were accompanied by low precipitation, which was only 42% of the ten-year average. This situation was largely due to the low precipitation observed in the Lyon and Oslo regions. The scarcity of precipitation was offset to some extent by higher than usual precipitation in the Austrian Alps. Consequently, hydraulic reserves in Spain were down in October, to a fill rate of 55%, i.e. 4.3 points below the ten-year average. The Scandinavian rate of reservoirs levels, 88.6% in October, was also down slightly from the prior month.

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

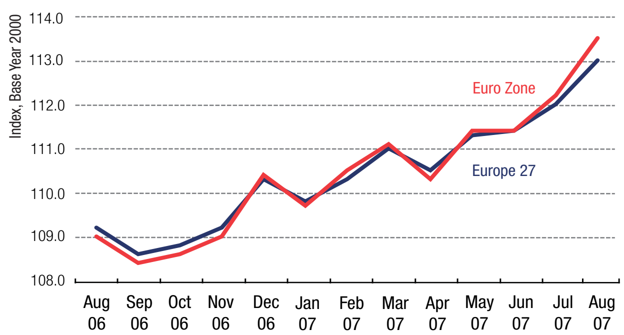
Economic Activity

European industry production index

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

	August index 2007	Monthly variation (%)	Variation/12 months (%)
Europe 27	113.0	+ 0.9	+ 4.0
Euro zone	113.5	+ 1.2	+ 4.3

Source: Eurostat

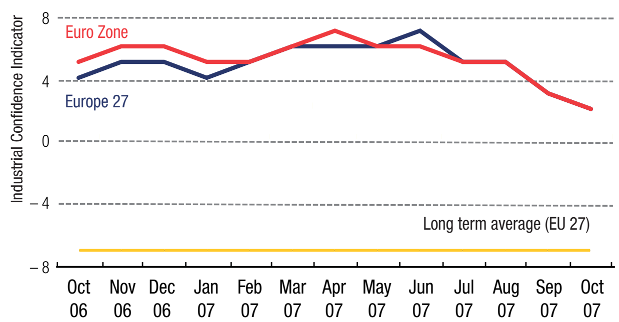


Opinion of Business Leaders

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

	August 2007	September 2007	October 2007
Europe 27	5	3	2
Euro zone	5	3	2

Source: Eurostat



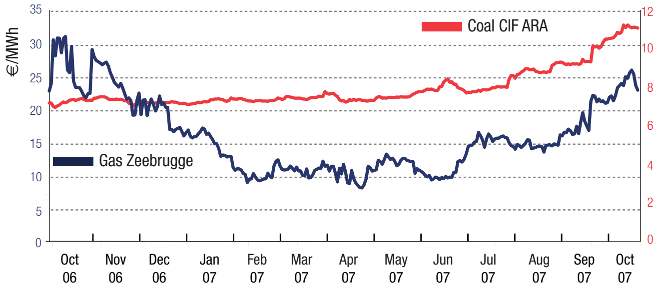
In August, the European industrial production was up by 1.2% in the Euro Zone and by 0.9% in the EU27. The main source of this increase was the durable consumer goods sector, up 3.8% in the Euro Zone (+3.2% in the EU27). The energy sector recorded a monthly increase of 0.8% in the Euro Zone and a decrease of 0.4% in the EU27. The 6 countries holding 70% of the CO_2 allowances recorded increases in industrial production: Germany (+1.7%), Italy (+1.3%), Spain (+0.5%), France and Poland (+0.3%) and the United Kingdom (+0.1%). The largest increase was recorded in Portugal (+2.5%) and the largest decrease in Slovakia (– 2.5%). The increase in industrial production is reflected in the 12-month trend: +4.3% in the Euro Zone and +4.0% in the EU27. The sharp decline of the industrial confidence indicator in October may reflect a slowdown in the autumn industrial production.

Energy prices

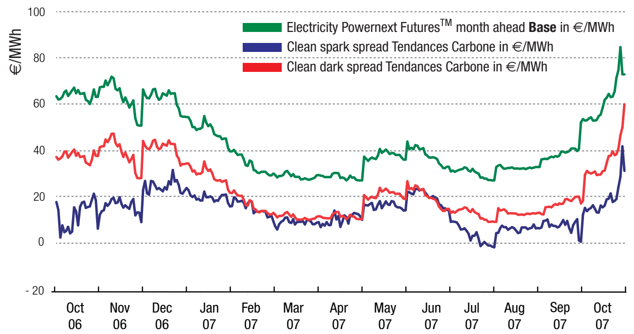
	September 2007	October 2007
	Average closing price	
Brent, in $/baril	76.67 $/B	82.48 $/B
Natural Gas Zeebrugge Month Ahead	4.85 €/MMBTU	6.65 €/MMBTU
Amsterdam coal CIF ARA Month Ahead	66.58 €/t	76.99 €/t
Powernext Futures™ month ahead – Base	38.07 €/MWh	60.05 €/MWh
Powernext Futures™ month ahead – Peak	52.55 €/MWh	87.25 €/MWh
Powernext Carbon spot price	0.08 €/t	0.07 €/t
Clean spark spread	7.57 €/MWh	17.91 €/MWh
Clean dark spread	16.82 €/MWh	34.07 €/MWh
CO_2 switch price coal/gas	18.24 €/t	35.35 €/t

Source: Reuters, Powernext, Mission Climat - Caisse des Dépôts

• Primary energy prices



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



October was characterized by the onset of cooler weather in Europe and a sharp increase in the price of all energy sources. Crude oil, the price of which has been increasing steadily since the beginning of the year, is in the news more than ever with the price of a barrel approaching USD 100. Tensions between Iraq and Turkey as well as the decline in the value of the dollar are contributing to this increase. Natural gas prices are following the same trend and are rising faster than the price of coal. Consequently, the CO_2 price at which it becomes economical to switch from coal to natural gas has doubled to approximately 35 €. One-month electric power futures were up by 58% and 66% respectively for base and peak contracts on Powernext Futures. This increase, which is greater than for fuels, doubled the spreads.

European Union: Status of the NAP II negotiations at 1st November 2007

Country	NAP II and Kyoto commitment: 2008-2012 – Annual allocations in Mt CO_2 (incl. reserves)	Limit use of Kyoto credits	Share of NAP II in Kyoto commitment[a]	Country	NAP II and Kyoto commitment: 2008-2012 – Annual allocations in Mt CO_2 (incl. reserves)	Limit use of Kyoto credits	Share of NAP II in Kyoto commitment[a]
Germany	453.1	20%	47%	*Slovakia*	*30.9*	*7%*	*46%*
U.K.	246.2	8%	36%	Austria	30.7	10%	48%
Poland	*208.5*	*10%*	*39%*	*Hungary*	*26.9*	*10%*	*27%*
Italy	195.8	15%	43%	Denmark	24.5	17%	45%
Spain	152.3	20%	46%	Sweden	22.8	10%	30%
France	132.8	13.5%	24%	Ireland	22.3	10%	34%
Czech Republic	*86.8*	*10%*	*56%*	*Estonia*	*12.72*	*0%*	*62%*
Netherlands	85.8	10%	45%	*Lithuania*	*8.8*	*20%*	*20%*
Romania	75.9	10%	29%	Slovenia	8.3	15.8%	45%
Greece	69.1	9%	50%	Cyprus	5.48	10%	-
Belgium	58.5	8.4%	46%	*Latvia*	*3.43*	*10%*	*14%*
Bulgaria	42.3	13%	35%	Luxembourg	2.5	10%	30%
Finland	37.6	10%	56%	*Malta*	*2.1*	*n.a.*	-
Portugal	34.8	10%	49%	**TOTAL**	**2,080.9**	**13.4%**	**48%**

In italic: countries taking legal actions against the European Commission.
Sources: Decisions of the European Commission IP/07/1614; (a) European Commission Report dated 14 December 2006 [C(2006) 6468].

For 2007, the year they entered the EU ETS, Bulgaria and Romania saw their allocations set at 42.3 and 74.8 Mt respectively. After the Portuguese, Romanian and Bulgarian NAP II were validated in October, the allocations to the 27 Member States are all known. 2,081 Mt will be allocated each year between 2008 and 2012, i.e. 10.5% less than the NAP II initially proposed by the States and 9.5% less than the NAP I (excluding scope changes). Seven countries are still contesting their NAP II before the European Court of Justice. At the beginning of November, the latter dismissed the Commission in its challenging of ex-post adjustments in the German NAP I, opening the way to potential European case law. The European emissions cap for Phase II will also depend on the inclusion of air transport in 2010 and the entry of new States. Norway, Iceland and Liechtenstein will soon submit their allocation plans to the Commission to join the European market.

Dashboard

CO_2 Markets

			Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07
Spot market (Powernext carbon)	Average closing price in €	Low price traded	10.75	8.00	6.40	2.30	0.76	0.94	0.48	0.25	0.09	0.10	0.08	0.06	0.05
		Average price traded	12.13	9.04	6.78	3.80	1.23	1.10	0.69	0.35	0.18	0.12	0.09	0.08	0.07
		High price traded	12.78	10.71	7.43	5.48	2.25	1.35	1.02	0.53	0.28	0.13	0.10	0.10	0.08
	Volume in kt	Daily average	154	203	306	223	296	157	111	102	48	22	31	28	28
		Total monthly	3,389	4,270	5,815	4,904	5,925	3,444	2,118	2,140	1,009	485	714	551	639
Futures Market (ECX)	Dec 2007 Average closing price in €	Low price traded	11.05	8.20	6.60	2.35	0.80	1.00	0.51	0.27	0.11	0.11	0.09	0.06	0.07
		Average price traded	12.51	9.38	6.90	3.85	1.28	1.14	0.72	0.36	0.19	0.13	0.10	0.08	0.07
		High price traded	13.15	11.25	7.65	5.60	2.25	1.36	1.03	0.58	0.29	0.15	0.11	0.10	0.11
	Dec 2008 Average closing price in €	Low price traded	15.05	15.65	17.00	14.50	12.25	13.65	15.89	18.98	21.07	18.88	18.40	19.77	21.38
		Average price traded	15.73	16.71	17.98	15.67	14.09	15.69	17.38	21.25	22.54	20.30	19.48	20.96	22.25
		High price traded	16.40	19.00	19.65	17.50	15.95	17.49	19.01	25.15	24.61	21.80	20.70	21.77	23.00
	Dec 2009 Average closing price in €	Low price traded	15.65	16.00	17.55	15.05	12.80	14.20	16.45	19.40	21.37	19.23	19.05	20.37	21.91
		Average price traded	16.28	17.24	18.51	16.23	14.64	16.24	17.92	21.58	22.82	20.65	20.00	21.50	22.81
		High price traded	16.95	19.55	20.20	18.05	15.95	18.03	19.54	25.45	24.92	22.15	21.11	22.24	23.52
	Volume in kt	Daily average	2,234	2,969	2,150	2,722	3,039	3,267	2,891	3,296	4,232	5,421	4,103	4,428	4,435
		Total monthly	51,124	65,325	40,851	59,892	60,786	71,879	57,826	75,803	88,866	119,268	94,369	88,561	102,008
Total european market volume in kt (PointCarbon)			82,832	116,498	63,177	108,679	104,157	123,087	93,958	121,626	135,328	157,708	123,428	127,969	139,797

Source: Powernext Carbon, ECX, PointCarbon

Climate

> Temperatures (°C)	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07
Germany - monthly average	13.3	7.9	4.8	5.3	5.1	7.3	12.4	15.1	18.4	18.4	17.9	13.8	9.5
Germany - difference monthly and decennial average	3.0	2.8	3.1	3.6	2.2	1.9	3.0	1.1	1.3	– 0.4	– 1.1	– 1.3	– 1.1
Spain - monthly average	19.8	15.4	10.1	9.9	12.3	12.6	15.1	18.4	21.6	24.5	24.1	21.7	17.6
Spain - difference monthly and decennial average	1.7	2.5	– 0.3	– 0.5	1.6	– 0.7	0.1	0.2	– 0.9	0.0	– 0.6	– 0.1	– 0.6
France - monthly average	15.9	10.6	5.7	7.5	8.4	8.5	14.8	16.0	18.8	19.3	18.8	15.9	12.3
France - difference monthly and decennial average	2.5	2.7	0.4	2.3	2.5	– 0.3	3.6	0.7	– 0.1	– 1.2	– 1.9	– 1.5	– 1.3
UK - monthly average	12.6	8.0	6.4	7.0	6.0	7.1	11.1	11.9	14.8	15.2	15.2	13.8	10.5
UK - difference monthly and decennial average	1.4	0.5	1.3	1.9	0.2	0.1	2.2	– 0.3	– 0.3	– 1.9	– 2.1	– 1.1	– 0.8

Source: Powernext Weather

> Precipitations (mm)	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07
Vienna - difference monthly and decennial precipitation	– 26.0	– 19.3	– 20.6	5.6	8.5	30.1	– 40.2	0.4	– 20.1	– 14.5	– 1.5	105.1	45.6
Madrid - difference monthly and decennial precipitation	47.6	47.2	– 26.5	– 26.1	4.9	– 15.1	35.7	43.0	16.9	– 8.9	– 2.9	– 17.8	– 6.5
Lyon - difference monthly and decennial precipitation	– 45.9	– 0.6	15.1	0.4	11.9	– 17.1	– 66.8	119.6	47.4	29.8	21.9	– 7.4	– 88.1
Oslo - difference monthly and decennial precipitation	62.2	34.9	15.5	23.0	10.6	– 13.2	– 28.5	6.5	23.6	36.1	– 12.3	– 2.6	– 80.7
Torino - difference monthly and decennial precipitation	– 34.6	– 71.2	18.5	3.6	– 23.0	8.4	– 33.9	43.3	56.7	– 22.5	49.3	– 24.0	– 18.9
> Hydraulics Reservoirs – Spread between the monthly rate of reservoir capacity and the decennial average rate.													
Spain	5.7	15.1	7.9	4.2	10.6	5.4	4.9	7.2	13.2	7.2	1.3	– 0.5	– 4.3
Nordic countries	– 20.5	– 11	– 2.6	0.9	– 2.3	– 0.9	6.2	5.0	3.6	5.7	7.5	5.4	4.5

Source: Météo-France, Nord Pool, MMA,ES

Economic activity

	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07
Total industry production index (excluding construction and seasonally adjusted), base = 2000													
Europe 27	108.8	109.2	110.3	109.8	110.3	111.0	110.5	111.3	111.4	112.0	113.0	-	-
Euro zone	108.6	109.0	110.4	109.7	110.5	111.1	110.3	111.4	111.4	112.2	113.5	-	-
Industry confidence indicator													
Europe 27	4	5	5	4	5	6	6	6	7	5	5	3	2
Euro zone	5	6	6	5	5	6	7	6	6	5	5	3	2

Source: Eurostat

Energy prices

		Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07
Brent crude oil, 1st maturity, in $/baril		59.84	59.86	62.69	54.66	58.81	62.46	67.63	67.93	70.44	75.63	71.38	76.67	82.48
Natural gas Zeebrugge, 1st maturity date, in €/BTU		7.59	7.05	5.74	4.56	2.96	3.12	2.88	3.40	2.88	4.25	4.21	4.85	6.65
Coal CIF ARA, 1st maturity date, in €/tonne		51.96	52.66	51.69	51.98	52.57	53.38	53.38	53.42	57.23	56.65	62.57	66.58	76.99
Powernext Futures™ month ahead, in €/MWh	Base	63.42	63.11	62.65	49.47	34.58	28.54	28.31	37.51	37.67	30.01	32.20	38.07	60.05
	Peak	91.18	95.79	96.41	74.87	45.54	36.03	36.80	59.38	63.23	46.09	48.19	52.55	87.25
Difference in prices of electricity and of natural gas, corrected for the price of CO_2: Clean Spark spread in €/MWh		11.94	15.53	24.41	19.96	15.30	8.79	10.09	15.67	19.77	3.71	6.03	7.57	17.91
Difference in prices of electricity and of coal, corrected for the price of CO_2: Clean Dark spread in €/MWh		37.06	38.57	41.06	30.20	16.94	11.10	11.22	20.27	19.94	12.37	12.67	16.82	34.07
CO_2 switch price coal/gas in €/tonne		62.87	55.66	39.91	24.57	4.54	5.94	3.01	9.62	0.52	17.55	14.21	18.24	35.35

Source: Reuters, Powernext, Caisse des Dépôts

A methodological note can be downloaded: www.caissedesdepots.fr – Publications & Documents – Carbon Finance

Caisse des dépôts et consignations
56, rue de Lille – 75007 Paris
Publication manager: Christian de Perthuis
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Caisse des Dépôts – Mission Climat
Contact: Morgan Hervé-Mignucci, 33 (0)1 58 50 99 77
morgan.herve-mignucci@caissedesdepots.fr
278, boulevard St-Germain – 75356 Paris 07 SP

Powernext SA
Contact: David Rapin, 33 (0) 1 73 03 96 06
d.rapin@powernext.fr
25, rue Louis le Grand – 75002 Paris