Commodity Markets at a Glance

July / August 2008

Market Letter by Vattenfall Trading Services

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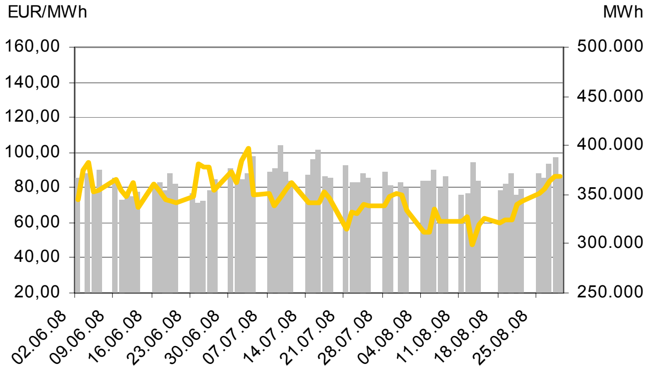
1. GERMAN POWER: Spot and long-term market march hand in hand

Good power plant availability, temperatures slightly above the normal and reduced load eased tension on the spot market.

Beginning of **July**, Day-ahead Base jumped for the first time this year over the 100 euros mark closing at 102.22 EUR/MWh on 3 July. Warm temperatures, low wind production and power plant availability below average caused this peak. Subsequently spot prices traded down to 65.72 EUR/MWh until 21 July on the back of normal temperatures, very moderate cooling water restrictions, and good power plant availability. Many power plant operators had shifted annual maintenances into autumn in expetation of a hot summer. The beginning of the holiday season mid of July put further downwards pressure on the spot. In the last week of July, spot prices started to rise again and traded up to 75.95 EUR/MWh on 31 July partially due to cooling water restrictions of about 400 MW.
On monthly average, day-ahead base was delivered at 69.94 EUR/MWh, which is 3.30 euros below the average price for the preceding month. The daily traded average volume slightly increased to 354.710 MWh.

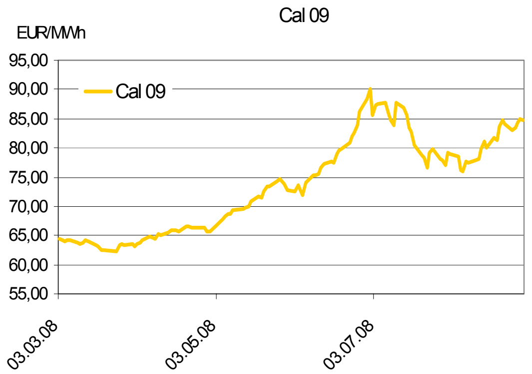
Beginning of **August**, prices slightly dropped trading in the range of 54-67 EUR/MWh. In the following weeks, Day Ahead Base strengthened as a result of the slowly increasing load and the time-delayed bullish effect of peaking coal prices. The upwards trend was

Figure 1: EEX Base in EUR/MWh



Source: EEX

Figure 2: Cal 09 base in EUR/MWh



Source: Vattenfall Trading Services

temporarily interrupted in week 33 when the reduced load in France caused a change in power flows. As a

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result, the German spot market dipped to 47.43 EUR/MWh on 13 August. Except from this week, power exports from Germany to France were high amounting to 3.000 MW on some days especially in peak hours. However, the average price spread between Germany and France was 3 euros in favour of the latter. Also quite unusual for the summer season, France became a net importer of power in August with net imports exceeding 120.000 MWh. German wind production was relatively high during summer season and averaged between 3.000 MW in July and 3.300 MW in August. Run-of-river production in the Alps was also good. Coolings water restrictions did not exceed 1.000 MW in August.

On 29 August, spot quotations at the EEX closed at 86.68 EUR/MWh. On monthly average, day-ahead base was delivered at 61.76 EUR/MWh, which is 8.18 euros below the average price for the preceding month. The daily traded average volume slightly dropped to 345.246 MWh.

In July, the long-term market dropped moving in line with oil and coal. In August, the market rebounded on the back of firm spot prices.

Beginning of July, the Cal 09 touched at a new all time high of 90.15 EUR/MW. Following the downturn in oil, gas and coal markets, the Cal 09 fell to 79.25 EUR/MWh until 31 July. Volatility of the market increased from mid-July onwards in line with declining trading volumes. In August, Cal 09 rebounded from 76.05 EUR/MWh on 5 August to 84.71 EUR/MWh until end of the month. Main driver was the firmer spot market which saw increasing load due to the gradual end of the holiday season. This consolidation was also supported by the recovery of oil, coal and CO2 prices.

2. NORDIC POWER: Spot prices strengthen

Hydrological situation and coal prices determine prices on spot and long-term market.

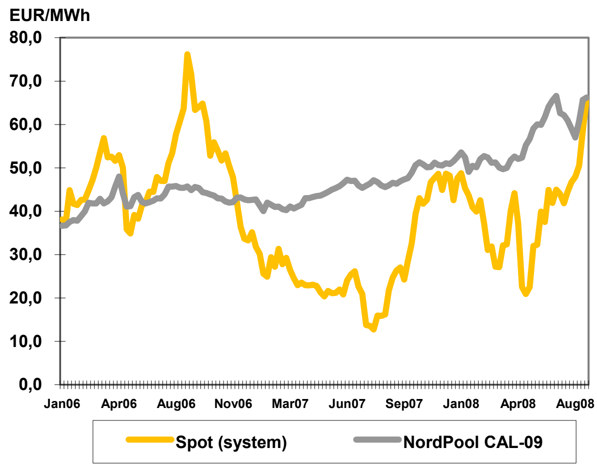
During July and August, the system price continued to climb towards the marginal costs of coal production. Inflows were below normal in Sweden during both months whereas for Norway they were slightly above normal during July and somewhat below normal during August. On the whole these values are much lower than the corresponding two-month period last year, especially for Norway, which is reflected in the price difference. Swedish reservoirs stood at 74.4% of maximum by the end of week 34, which is below normal. At the same time, Norwegian reservoirs stood at 86.1% of maximum, which is slightly above normal. Precipitation outcomes in Norway and Sweden amounted to 10 TWh during July and 16.1 TWh during August which is some 67% and 101% of normal respectively.

On 29 August, the Nordic Cal 09 closed at 66.80 EUR/MWh (-1.45 EUR/MWh compared to end of June) on the back of lower coal and CO2 prices. However, the next quarter contract Q4-08 closed marginally up, at 73.60 EUR/MWh (+0.25 euros compared to the last of June) as a consequence of a weaker hydrological balance, despite lower marginal costs for coal production.

	2008 Aug.	**2007** Aug.	***2008*** *June*
Avg system spot (EUR)	**54.6**	**16.5**	40.5

Source: NordPool

Figure 3 – Nordic spot price and forward Cal 08 for 2006-2008



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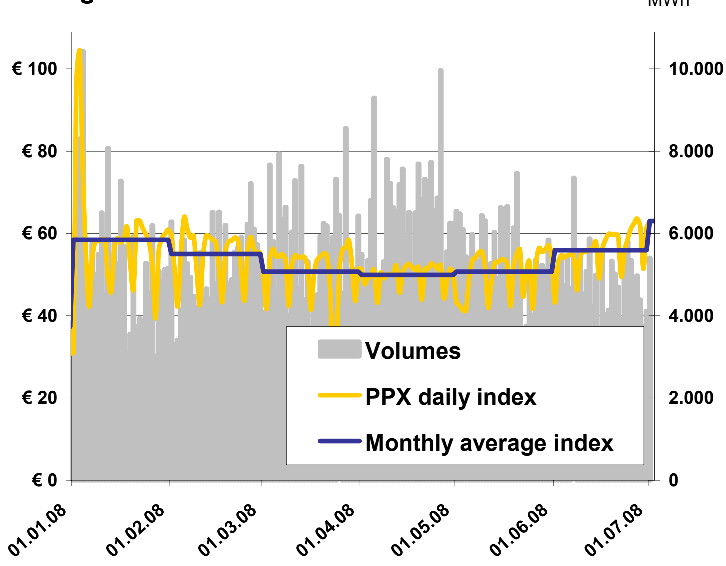
3. POLISH POWER: Bullish vacations

Fears of system instability, shortage of CO2 allowances and low domestic coal supplies heat the market.

The average temperatures in July (+19.1^{0}C) and August (+18.5^{0}C) were slightly above the normal but lower than last year. The average cloudiness was 4.9 and 4.2 – quite similar to last year.
For the first time in recent years, consumption did not rise significantly. Year-on-year, system monthly demand increased by only 1.4% in July (August: 0.14%). Monthly export capacities were again cut to zero.
The publication of the National Allocation Plan did not change the market sentiment - energy was bullish during the whole vacation period. Main drivers were fears of system instability at high temperatures, lack of CO2 allowances and insufficient domestic coal supplies. Poland is becoming increasingly dependent on imported coal due to domestic output problems.
In July, the average spot price was delivered at 62.34 EUR/MWh for base load and 72.79 EUR/MWh for peak load. Spot prices slightly eased at the beginning of August and recovered in the second half of the month. In August, spot prices averaged 62.76 EUR/MWh for base load and 75.23 EUR/MWh for peak load. Balancing market prices for July and August averaged 66.02 EUR/MWh, rising sharply especially at the end of August.

Figure 4: Prices & volumes on PPX



Source: Vattenfall Trading Services

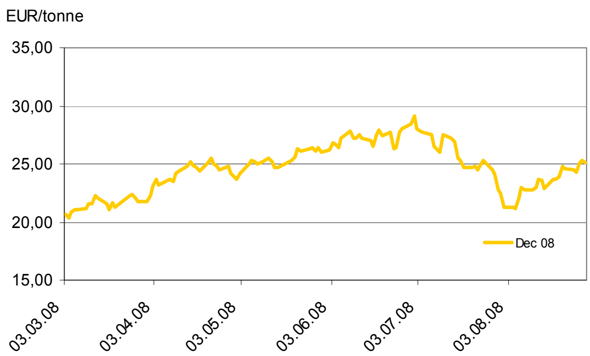
On the long-term market, Cal 09 base load dropped by about 3.50 euros to 63.50 EUR/MWh in July, but then consolidated at a level of 65.68 EUR/MWh on 31 August.

4. CO2 TRADING: Down and rebound

Starting into July with another two-years high, CO2 quotations dropped rapidly until beginning of August.

Increasing power, oil and coal prices pushed CO2 quotations to 29.16 EUR/tonne on 1 July. The very next day, prices started to plunge being initiated by the crashing coal market. Decreasing power and oil prices intensified the downwards journey throughout July. In the last week of July, Portugal and France

Figure 5: European Union Allowances in EUR/tonne on forward market



Source: Vattenfall Trading Services

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published allocation figures for 2008. This allayed fears of a tight market which further pushed CO_2 prices down.
The CO_2 market in August was characterised by low trading volumes and the lack of fundamental news. On 5 August, CO_2 certificates stopped its downward movement at 21.20 EUR/MWh – having lost almost 30% in value – the biggest decline across all energy commodities in this period. Subsequently, the market rebounded whereas CO_2 correlation to gas, oil and power declined. Trading volumes of less than 3 million tonnes on some days were exceptionally low.

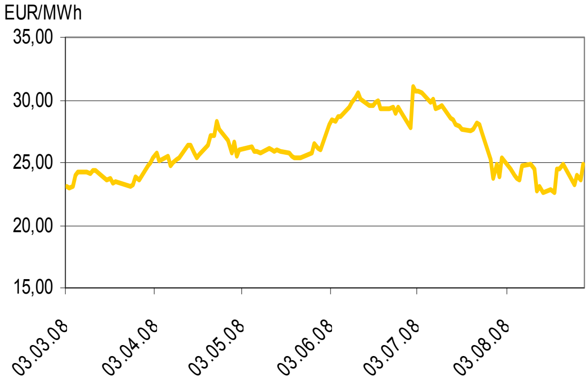
Price signals coming from the markets for carbon credits issued under the Clean Development Mechanism were mixed: Positive news that the EU ETS will be linked with UN's Clean Development Mechanism before December 2008 put downward pressure on CO_2 prices. At the same time, tighter regulations on CER projects and a reduction in the amount of expected carbon credits strengthened the emission market. End of August, CO_2 prices closed at 25.08 EUR/tonne on 29 August, down 4.06 euros compared to beginning of July.

5. GAS TRADING: Stabilized by the prompt

Parallel to the oil market, gas traded down though being supported by a good supply-demand situation.

The NBP front month peaked at 31.06 EUR/MWh on 1 July, and came down almost 20% in the course of the month moving nearly one-to-one with the oil market. A low demand, reduced injection capacities due to high storage levels, and a safe supply with low level of maintenance outages stabilized the market. NBP stopped its way south at 23.89 EUR/MWh on 31 July.
In August, the gas market was quite volatile and developed sideways mainly moved by supply disruptions. A small leak at the Norwegian Kvitebjoern field's gas export pipeline reduced supplies by 16-20 million cubic meters a day. As a result, gas quotations on NBP gained almost two euros day-on-day touching 24.47 EUR/MWh on 20 August. Unplanned maintenance works on the sub-sea pipeline connecting UK with the European continent led to the decoupling of gas markets. NBP prices increased to 24.82 EUR/MWh until 29 August while TTF prices lagged behind thanks to Norwegian suppliers redirecting their gas flows to Continental Europe. In relation to oil, gas market stayed on a very high level throughout July and August.

Figure 6: NBP front month in EUR/MWh



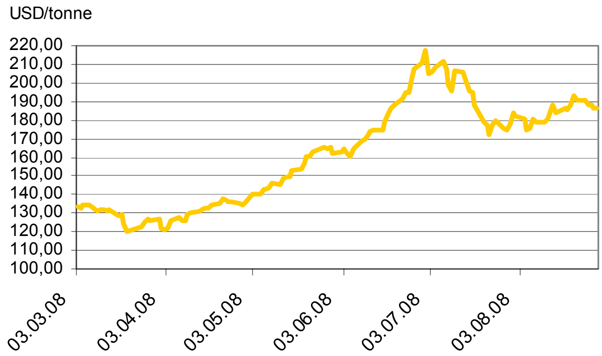
Source: Vattenfall Trading Services

6. COAL TRADING: Change in sentiment

The coal market saw an unprecedented market movement beginning of July.

The coal speculation found a peak early July, before crashing heavily on 2 July. No single event can be pinpointed for the sudden turnaround, but speculation of financial players seems to have been a major factor. After the market crashed to 190 USD/tonne, prices found support again and closed at 205.09 USD/tonne. However, the other commodities followed suit, and finally a sentiment switch allowed the market to price in bearish factors. The credit crunch and a weakening economy in OECD countries, a fairly low European spot demand and overbought EUR/USD and oil pushed prices down to 172.31 USD/tonne on 23 July.
Through August, the market took a consolidation breath, supported by tight supply-demand expectations for the coming winter. The gas disruptions had a minor impact on coal prices. API Cal 09 contract traded in the range 175-193 USD/tonne and closed at 186.75 USD/tonne on 29 August, down 25 dollars compared to end to June. In terms of volumes, swaps trading has been very thin and choppy through the whole period.
Freight started to tumble in the summer hole, and especially the capesize market started to crash in the end of the month, because of the very poor demand for coal and iron ore shipments.

Figure 7: API 2 Cal 09 in USD/tonne



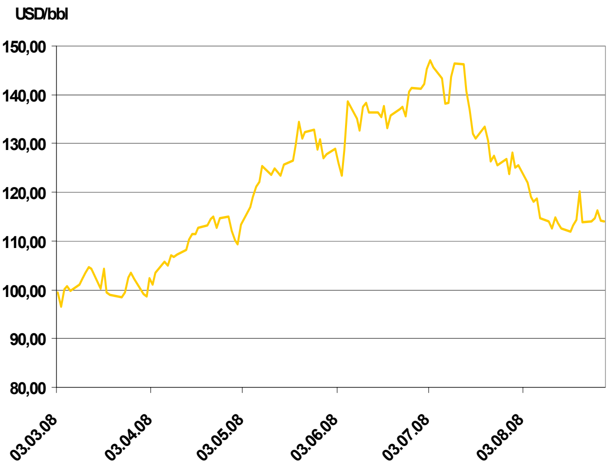
Source: Vattenfall Trading Services

7. OIL TRADING: Bull-run followed by extreme correction

Crude oil price drops by 30 USD/bbl in July and August.

Oil price hit a new all-time high of 147.05 USD/bbl on 3 July before the market entered a period of extremely high volatility. Until mid of July, IPE Brent Oil bounced up and down with one-day losses/wins of up to 5 dollars. Lacking major fundamental market news, oil was mainly driven by the ongoing weakness in the dollar and geopolitical tensions. On 14 July crude oil began its journey down on the back of market participants closing their long positions and reduced trading activities. Until 12 of August the market fell to 112.50 USD/bb before it marched sideways. While the conflict between Georgia and Russia put upward pressure on oil, a stronger US dollar worked against rising prices. Fears that the hurricane season could put 25% of US crude oil production at risk did not affect the oil price, which indicates that the market still

Figure 8: IPE Brent Oil in USD/bbl



Source: Vattenfall Trading Services

trades on a high level. Oil price settled down at 114.05 USD/bbl on 29 August, down 30 USD from beginning of July.

ABBREVIATIONS USED

API2	All Publications Index at the Amsterdam-Rotterdam-Antwerp Range
API4	All Publications Index for South African free on board (FOB) coal
CER	Certified Emission Reduction, resultant of an emission-reducing project in developing countries that has been certified
EEX	European Energy Exchange, Leipzig
EUA	European Union Allowance
ITL	International Transaction Log, records transactions of CERs to national registries
NAP	National Allocation Plan, determine the total amount of CO2 that installations covered by the EU ETS can emit in a given Member State
NBP	National Balancing Point, gas hub in Great Britain
OPEC	Organization of the Petroleum Exporting Countries
PPX	Polish Power Exchange Towarowa Gielda Energii SA
SWEPOL	Submarine cable connecting Sweden and Poland
TSO	Transmission System Operator

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