Commodity Markets at a Glance

May 2011

Market Letter by Vattenfall Energy Trading

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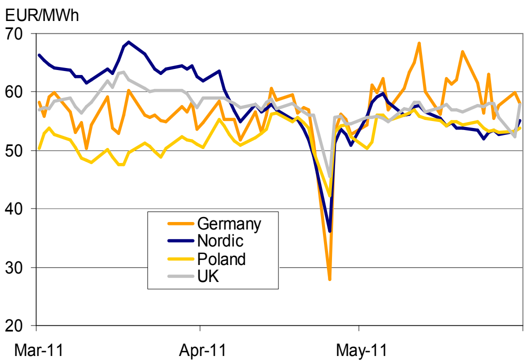
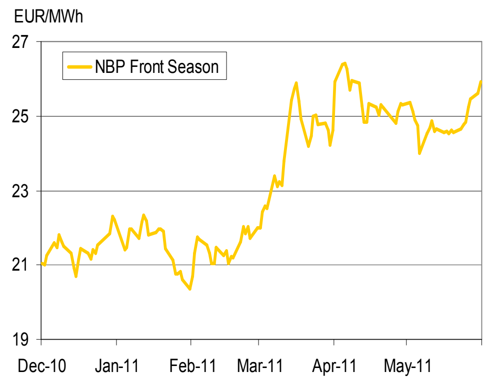
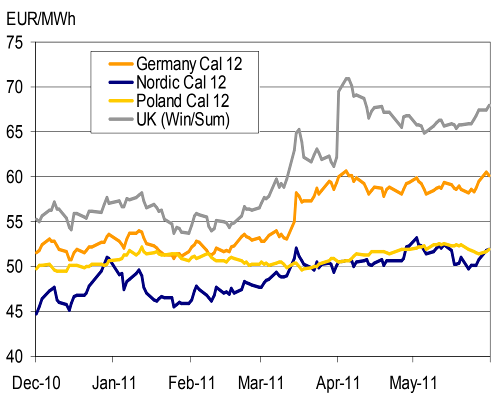
European Power
Spot markets: Higher prices except in UK



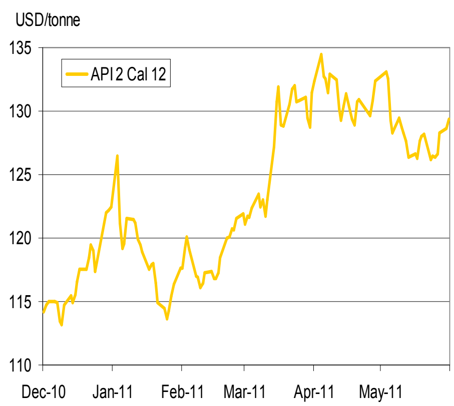
Gas Trading: Low start amid weak demand



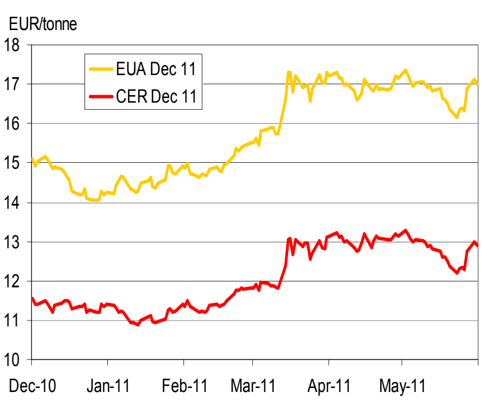
Power derivative markets: Sideways movement



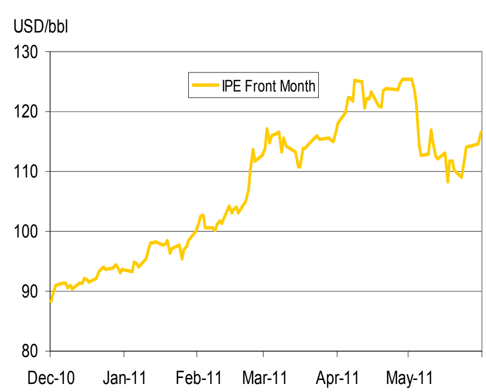
Coal Trading: Huge price drop



CO_2 Trading: Ongoing sideways movement



Oil Trading: Bullish sentiment



Sources: EPEX Spot, EEX Power Derivatives, Nord Pool, PolPX, Vattenfall Energy Trading

VATTENFALL

Commodity Markets at a Glance

1. EUROPEAN POWER

Spot markets: Higher prices except in UK

Spot prices on European electricity markets reached a higher level than in April. The average Nordic system price went up by 0.65 EUR/MWh compared to the previous month and the Polish spot market rose by 1.72 EUR/MWh. The German spot market registered an even bigger increase of 5.25 EUR/MWh. Only UK Spot prices lost, on average by 0.63 EUR/MWh.

[EUR/MWh]	Germany	Nordic	Poland	UK
Current month av	56.83	54.49	53.45	55.09
Last month av	51.58	53.84	51.73	55.72
Difference	5.25	0.65	1.72	-0.63

Continental Europe

German day-ahead base opened at 54.38 EUR/MWh, reached a high of 68.30 EUR/MWh on 12 May, fell again afterwards but then climbed back to a second high of 66.88 EUR/MWh on 20 May. By the end of the month, it started to level out.

On the back of the moratorium on nuclear power plants in Germany and a large number of nuclear power plants undergoing revision, capacity fell from approx. 11 GW to approx. 6 GW.

However, German spot prices did not increase as much as expected. Solar energy production was very strong, an average of 10 GWh during peak-hours helped to ease out the situation in Germany.

Another factor, which helped to hold spot prices in Germany at a relatively moderate level, was the very good availability of French nuclear power plants. France, normally a net importer from Germany, exported an average of 1.3 GW to Germany.

In the Benelux market, Dutch base load was at 56.83 EUR/MWh and peak load at 67 EUR/MWh, with the last two weeks of the month being firm on the back of lower plant availability in Germany and low wind generation throughout the month. The main fundamental changes came from the German system where the tightness increased significantly month-on-month on the back of several unplanned outages in coal and gas plants, and maintenance on several nuclear plants. This triggered more exports from the Netherlands to Germany, as well as from France to Germany. The Netherlands kept on receiving power from Belgium throughout the month. The outage of the BritNed cable for almost the whole month prevented Holland from receiving power during peak hours, which was an additional bullish factor for the Central-Western European system.

Nordic

The Nordic system price rose at the beginning of the month because of colder and drier weather than normal. Temperatures were up to 6°C above normal during the second week of the month and during the second half precipitation also reached values above normal. In total, May was 1°C above average and precipitation was also well above normal. The yearly maintenance period continued with prolonged outages. In Sweden, the maintenance at Ringhals 2 was prolonged by 3 months and the reactor is expected back by the end of August. In Finland, the maintenance period started.

The hydrological balance improved with little more than 7 TWh. When temperatures and precipitation rose above normal levels, the inflows increased also on the back of the snow melting earlier than normal. During the second half of the month, inflows were below normal despite warmer and wetter weather. The huge deficit in snow and ground water reservoirs in combination with early melting cut inflows. The precipitation outcomes in Norway and Sweden were approximately 16 TWh during May, which is almost 6 TWh more than normal. Swedish reservoirs stood at approx. 44% of maximum by the end of week 21, which is 4% above normal at this time of the year. Norwegian reservoirs stood at 37% of maximum, which is 6% lower than normal.

Poland

In Poland, May saw average temperatures at 14°C, an average temperature only little above May last year. Domestic demand increased by 2 year-on-year and decreased compared to April 2011 by 3%. The maintenance level in May was high. As a result, supply decreased by 3 % compared to the previous month. On the other hand, supply increased by 3% compared to May 2010.

An important fundamental factor influencing energy prices was the huge energy export to Germany and the Czech Republic, which averaged 793 MW (5% of domestic demand). It was 731 MW more than the year before and 262 MW more than in the previous month.

The average spot price for baseload on PPX amounted to 53.45 EUR, representing a 14% increase year-on-year and a 3% increase month-on-month. According to market information, the increase may have also been caused by rising domestic coal prices, which are the dominant fuel for Polish power plants. However, as coal is traded in bilateral contracts, it is difficult to verify this.

The Polish spot price was lower than in Germany, the Czech Republic and Sweden (3.38 EUR below Germany, 3.14 EUR below the Czech Republic and 1.04 EUR below Sweden). Spreads in May 2011 differed a lot from the previous year, when energy in Poland was much more expensive than in connected power systems. The reason for this fundamental change is the closure of several nuclear power plants in Germany, leading to significant price increase in Germany and the Czech Republic.

UK

During May, the UK spot market continued to move sideways following stable gas prices and a strong supply situation. Demand was below normal for almost the whole month because of the warm and sunny weather and lower demand during two UK bank holidays. The return of the interconnector between France and the UK was delayed by several weeks. Therefore, only 1 GW was available for imports and exports. The BritNed cable tripped in the middle of the month and was not fully available during three weeks. The UK imported power during the weekends, but also exported power during quite a few working days to the Netherlands during peak hours. UK day-ahead started at 55.63 EUR/MWh and closed at 57.79 EUR/MWh.

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Derivative markets: Sideways movement

After the heterogeneous development of prices in April, power term markets moved sideways during May.

Continental Europe

On the back of the disaster in Japan, a new and higher price level was established in March. Prices remained on this level throughout May. The daily traded volume averaged below normal, at 900 MW. The prices for the German Cal 12 were in a range of 58.11 EUR/MWh to 60.50 EUR/MWh. Just one distinct upward move could be observed after 27 May when the German government announced that seven of the oldest nuclear power plants will remain off-grid. At the end of the month the daily traded volume reached a monthly high of approx. 1.3 GWh.

The Dutch Cal 12 contract remained in its sideways range for most of the month, ranging between 57.50 EUR/MWh and 58.50 EUR/MWh. By the end of May, Cal 12 broke the upper resistance to reach 59.50 EUR/MWh on the back of a stronger German market, bullish fuel prices and a very firm spot market. Overall, the Dutch versus German spread on the Cal 12 remained stable, around -0.70 EUR/MWh, as the tightness in the German market prevented any upside in the short-term.

Nordic

Despite the strong spot, most contracts decreased during the month following the strengthening hydrological balance. Both the Quarter 3/2011 and the Cal 12 contract opened at a monthly high. The Cal 12 contract decreased from 53.24 EUR/MWh on 1 May, came down to 49.70 EUR/MWh on 24 May and closed at 51.95 EUR/MWh, down 0.4 EUR/MWh compared to closing in April. The Nordic Quarter 3/2011 closed at 54.65 EUR/MWh, down 1.65 EUR/MWh compared to the last trading day in April.

Poland

In May, the liquidity on the term market was healthy, with 1198 MW traded for June 2011, 285 MW for Quarter 3/2011, 804 MW for Quarter 4/2011 and 869 MW for Cal 12.

After a price increase in the first half of the month, it fell on 11 June back to the level of the April closing, reaching 52.88 EUR/MWh at the end of the month. Quarter 3/2011 base contracts followed the sideways trend throughout most of the month, with two important increases at the beginning and at the end of May, reaching 52.82 EUR/MWh and thus representing 1.6% increase. Cal 12 traded in a narrow sideway trend, with a price of 51.93 EUR at the end of May – almost the same as at the end of April.

UK

After a volatile March and April, the curve traded down during May to end at more or less the same level as at the start: Winter 2011, for example, opened at 65.76 EUR/MWh and closed around 67.96 EUR/MWh. The market was mainly driven by gas, coal and CO_2 prices. A lot of uncertainty still persists about how the situation in Japan will impact European LNG deliveries in the future. Moreover, market players are unsure what impact the closure of the German nuclear plants will have on Continental power prices, especially during the winter periods.

2. CO_2 TRADING: Ongoing sideways movement

CO_2-prices remained in a channel between 16.17 EUR/tonne and 17.37 EUR/tonne.

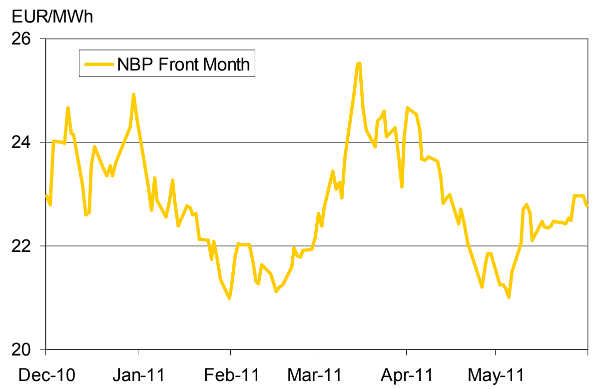
European Union Allowances (EUA) in May traded mostly in the same sideways channel in which they have been since mid March. However, a little dip was observed for the December 2011 contract, which has consistently lost value since it opened at 17.37 EUR/tonne and broke the recent sideways trend in week 20 by falling. One reason was the announcement of the EU Commission that the European Investment Bank might already start selling allowances from the new entrant reserve of the third phase (NER 300) by the end of this year. This pushed the market down to 16.17 EUR/tonne before bullish news of Germany's decision to close its nuclear plants pushed prices back up to 17.37 EUR/tonne. But the gains were not sustainable and prices fell back to close the month at 17.13 EUR/tonne.
Prices for Certified Emission Reductions (CER) mainly followed the price movements of EUAs. Nevertheless, prices stayed relatively weak as the spread between CERs and EUAs stayed below -4.00 EUR/tonne for the December 2011 contracts. This was mainly driven by the high issuance seen so far this year and in May. The total amount of credits issued by the UN this year has already reached last year's total volume of 132 million tonnes.

3. GAS TRADING: Low start amid weak demand

NBP gas prices went up on the back of expected shortages in June.

Demand was below seasonal average in May despite decent storage injections (20 mcm/d) and strong Interconnector exports (36 mcm/d). Long-term rough storage was on maintenance for four days in mid-May. Maintenance reduced flows from United Kingdom Continental Shelf heavily also at Theddlethorp, Bacton Seal, Teesside, Barrow and Bacton Shell. LNG flows have seemingly not been impacted by the increased Japanese LNG demand. Network performance has been mixed; the system opened mainly short and thus helped to support prices. LNG send-outs and mid-range storage withdrawals were required to balance the system. Front season prices traded from around 25.63 EUR/MWh to 25.92 EUR/MWh. The NBP June contract opened at 21.24 EUR/MWh and traded as low as 21.01 EUR/MWh in the first week of May. Subsequently, the contract rebounded on 11 May to its high of 22.97 EUR/MWh on the back of the expected tightness in June due several planned outages at Ormen Lange, Troll and CATS.

NBP Front Month in EUR/MWh



Source: Vattenfall Energy Trading

4. COAL TRADING: Huge price drop

The market was cautious with thin volumes amid macro-economic worries.

Macro-economic worries engulfed the market in early May and a lot of speculative investors cut all or most of their length causing a big sell-off in commodities and metals in particular. Brent crude oil saw its worst weekly fall and largest ever one-day fall, in dollar terms, since oil trading began on the New York Mercantile Exchange in 1983.
Regarding the coal market, the Cal 12 API2 fell 7 USD/tonne during this free-fall period, dropping from 133.25 down to 126.25 USD/tonne. Afterwards, it traded in a sideways range and eventually recovered some of its losses on the back of renewed bullish sentiment following a research note from Goldman

Sachs on oil. Further bullishness came from the permanent suspension of the seven German nuclear plants. Overall, the Quarter 3/2011 API2 fell 5.90 USD/tonne month-on-month and the Cal 12 API2 lost 2.95 USD/tonne.
Market-wise, players seemed to be hesitant, nervous and defensive following the sharp correction in macro-economic and commodity price sentiment. Trading volume has been very thin and it seemed as if the market was looking for direction.

5. OIL TRADING: Bullish sentiment

Middle-East, Euro and Greek crisis support worries of market participants.

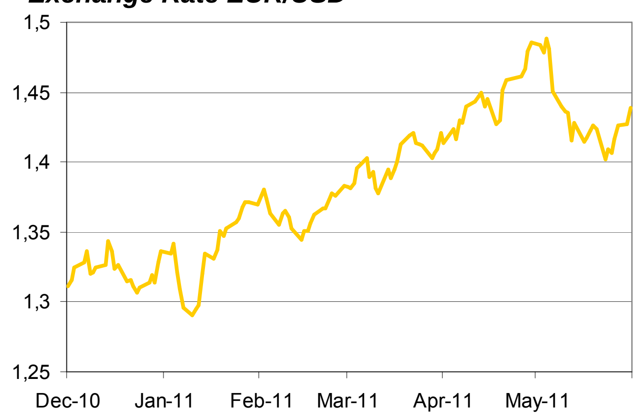
May went out on a bullish note with gains of a little over 2 USD/bbl on both WTI and Brent. Heating Oil moved up 5.2 cts/gal and Gasoline 1.9 cts/gal. This last day push on the crude side came from the closure of the Keystone Pipeline, which has the capacity to transport 435,000 barrels per day from Canada to the US mid-West and a remarkable resurrection of the Euro-Dollar exchange rate.
Throughout May, the front month WTI lost 11 USD/bbl (9.7%) and Brent lost 9 USD/bbl (7.3%). US macroeconomic data led to some worries among market participants: Housing data were disappointing and consumer and producer confidence were down. In China, worries persisted that the economy is overheating and inflation rates are high. Last but not least, the Euro crisis and the Greek crisis scared the market and on the back of that the euro weakened considerably.

6. FX TRADING: Volatile market

The EUR/USD exchange rate remains volatile amid recessions.

The European Central Bank adjusted its market expectations towards moderate rate hikes. Debt problems in some European countries and the crisis in Greece have added to nervousness in the market and put pressure on the euro. On the dollar side, weaker global growth, general macroeconomic factors and problems regarding the US debt ceiling dragged the US dollar down. Moreover, the fact that Japan and Australia are officially in recession added to the tense situation.

Exchange Rate EUR/USD



Source: Vattenfall Energy Trading

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ABBREVIATIONS

API2	All Publications Index at the Amsterdam-Rotterdam-Antwerp Range
API4	All Publications Index for South African free on board (FOB) coal
ARA	Amsterdam-Rotterdam-Antwerp, major coal-importing ports in north-west Europe
C4	Voyage freight rate between Richards Bay and ARA
CCGT	Combined cycle gas turbine
CDM	Clean Development Mechanism
CHP	Combined heat and power plant
CER	Certified Emission Reduction, resulting from an emission-reducing project in developing countries that has been certified
Dark spread	Spread between the fuel and power price for a generator
ECX	European Climate Exchange
EEX	European Energy Exchange, Leipzig
EPEX Spot	European Power Exchange, German-French spot exchange, Paris
ETS	European Union Emissions Trading System
EUA	European Union Allowance Unit
FOB	Free on board: a shipping term which indicates that the supplier pays the shipping costs from the point of manufacture to a specified destination
IMF	International Monetary Fund
IPE	International Petroleum Exchange, London
IUK	Interconnector UK – gas pipeline connecting the UK and Europe
LNG	Liquefied natural gas
MCM/D	Million cubic metres per day
NBP	National Balancing Point, gas hub in Great Britain
NCG	NetConnect Germany – German gas market area
N_2O project	CDM project to reduce nitrous oxide (N_2O)
OECD	Organisation for Economic Co-operation and Development
OPEC	Organization of the Petroleum Exporting Countries
OTC	Over-the-counter trading
PPX	Polish Power Exchange, Towarowa Giełda Energii S.A.
Spark spread	Difference between the price of electricity sold by a producer and the price of the used fuel
TSO	Transmission system operator
TTF	Title Transfer Facility: virtual gas trading hub in the Netherlands
UNFCCC	United Nations Framework Convention on Climate Change

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