



More renewable generation and less incentive to switch fuels undermines previous relationship

The benchmark German electricity front year and the front-year emissions contract have shown signs of decoupling since January of this year, with Germany's abundance of renewable power proving to be an important contributing factor.

ICIS assessments show that the correlation between the German Calendar Year 2013 Baseload and the EU Allowance (EUA) December 2012 product has weakened in 2012 compared to 2011's average value.

Between the start of the year and the end of October, the two benchmark products' monthly correlation coefficient averaged 0.43, while in 2011 the average value was 0.67

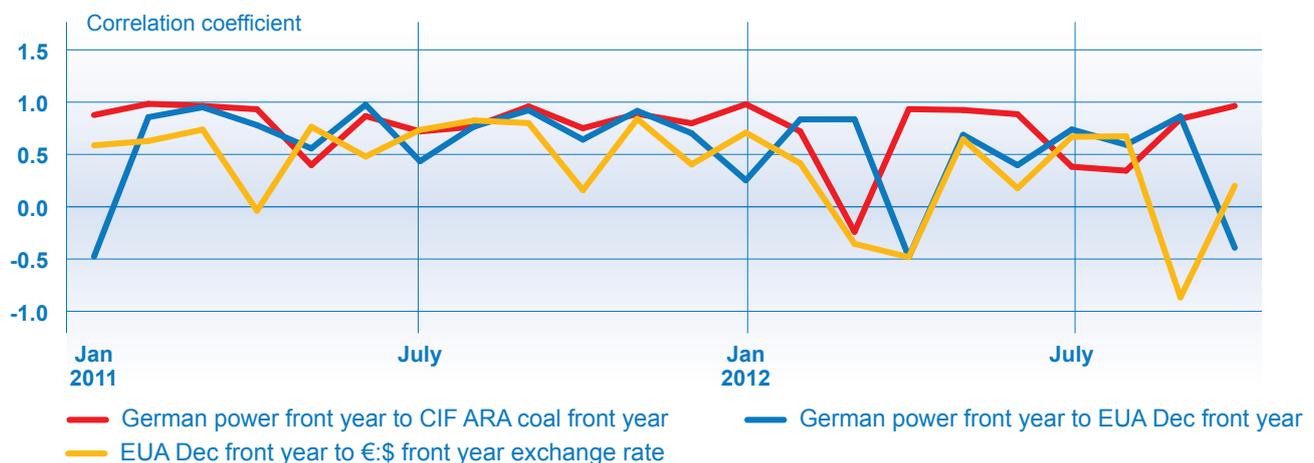
Additional renewables

The unravelling of the relation between the two benchmark contracts has largely been due to strong levels of wind and solar generation and its increasing share in Germany's energy mix. This has eroded the impact of emissions products in electricity production, according to market participants.

Renewable energy accounted for a quarter of Germany's power production in the first three quarters of 2012, according to data from industry association BDEW and German study group AG Energiebilanzen. The additional generation has put significant bearish pressure on the prompt and displaced fossil-fuelled generation, particularly during peak times, because with no fuel to pay for, marginal costs are zero. This effect is particularly noticeable during the summer quarters as solar generation capacity has increased.

Benchmark Contract Correlations

SOURCE: ICIS; currency from Bloomberg



The correlation coefficient ascertains the strength of the relationship between two variables. Positive values up to 1.0 illustrate the two variables have a direct relationship, while negative values up to minus 1.0 imply an inverse connection. A value closer to zero implies a weakening correlation, while the closer the value to 1.0, the more the two markets move in tandem.

As a result, the correlation between the carbon and German benchmarks is even weaker year on year when only the summer quarters, Q2 and Q3, are taken into account. The two benchmark products' monthly correlation coefficient averaged 0.47, while in 2011 the average value was 0.34.

Germany's renewables production is also set to climb in the near future, as developers are keen



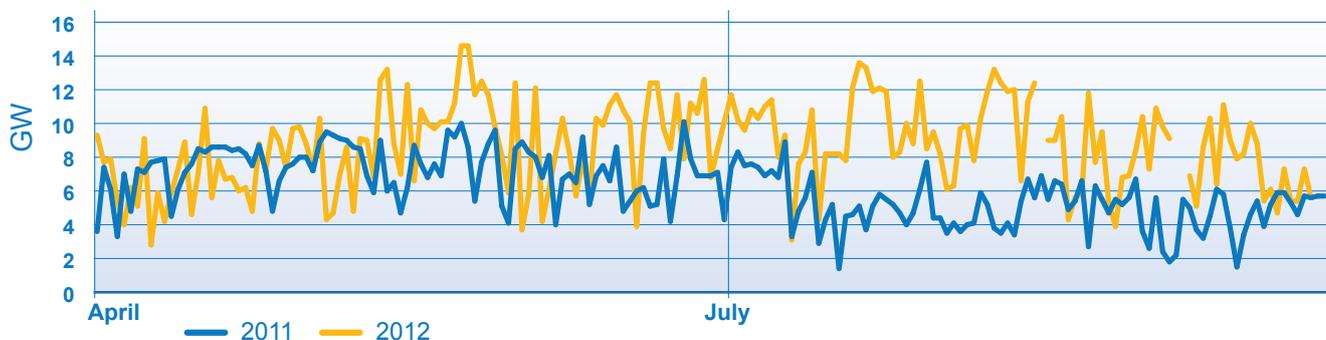
to rush through solar projects before subsidy cuts so the emissions market's influence over German power prices looks set to soften further.

According to Day-ahead forecast data from Eurowind Spotrenewables, solar production accounted to around 1.5TWh across Q2 and Q3, a year on year jump of 36.3%.

Prices at European gas hubs have largely been bolstered by increased Japanese LNG demand after the radiation leak at the Fukushima plant, which has seen East Asia take flexible LNG cargoes that may have otherwise have gone to Europe.

German Solar Summer Production Forecast

SOURCE: Eurowind Spotrenewables



“The price setters [in Germany] tend to be wind and solar,” said a utility-based trader. “There is more green energy available during the peaks and the spread between the peaks and the cheaper hours, such as nights and weekends, is getting smaller. All these old relationships we had – the renewables are a complete game changer,” he added.

The influx of new renewables capacity has also led the market to rethink the strength of the curve, putting downward pressure on far curve prices and helping the German power benchmark deviate from its carbon equivalent.

Gas generation squeezed out

Gas-fired generation, traditionally reserved for peak hours, has been sidelined, with high gas prices squeezing spark spreads. Lower generation margins for gas-fired plant has reduced the likelihood of electricity generators switching from coal to cleaner gas-fired generation, undermining the responsiveness of the emissions market to power trends.

“German power prices would have to be €60.00/MWh or higher for gas plants to be economical,” said one power trader. The Calendar Year 2012 Baseload product has delivered at €43.49/MWh up to 31 October, according to ICIS indices.

Little support is likely to be provided by the demand side over the winter, with preliminary weather forecasts predicting milder temperatures. *“We may get one or two weeks of colder temperatures, but at the moment I am not favouring a prolonged period of cold in Germany,” said one meteorologist.*

Collapsing coal prices

The bearish trend on the German curve has been exacerbated by declining coal prices, which have been pressured by a supply glut in the market from China's coal consumption falling and weakening macroeconomic sentiment in the eurozone (see EDEM 17 July 2012). This in turn has strengthened dark spreads, and further chipped away at the link between German power and carbon.



German power-emissions linkage weakens

“As long as other fuels like coal do not rally much, spot prices [and by extension renewables] will have a greater impact,” argued the trader.

There seems little chance of coal providing support for German power contracts for the remainder of the year, with coal traders firmly in bearish territory.

“This is simply a problem of global oversupply, even though demand is strong,” one coal trader previously told ICIS. Although some countries are expected to cut their production next year, the source felt that this would have minimal impact to the supply-demand balance. *“2013 will be a painful year, and we will see little price recovery, with values moving sideways. People seemed to be more optimistic about 2014,”* he added.

Emissions policy volatility

While German power contracts have been extricating themselves from carbon price movements, in recent months the emissions market has taken its cue from outside the fuels complex, which has further contributed to the decoupling of the benchmark contracts' relationship.

One example is what one trader called *“policy-driven volatility”*, where carbon-specific regulatory issues encourage emissions prices to deviate from German power prices movements. This is next likely to occur on 14 November when the European Commission release their due diligence on the EU ETS.

Another factor is general sentiment regarding the EU's economic prospects, which has its own peculiar impact on carbon prices. *“It seems that macroeconomic sentiment has more of an influence on the carbon price than fundamentals from the energy mix,”* said a carbon analyst based at a commodities brokerage.

“What we were observing is a stronger correlation with the performance of the euro - whether it's appreciating or depreciating versus the dollar,” she said, adding that the euro is a reasonably strong indicator of investor confidence in Europe.

“Power prices should be more important, but decisions about the future of the eurozone create the framework within which power companies operate. I cannot say there is absolutely no correlation at all between carbon and power, but I can say that the correlation with the euro is more significant,” she concluded. However, carbon prices have struggled to exert their influence on German power in the last couple of months amid policy-driven volatility, according to currency data.



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