

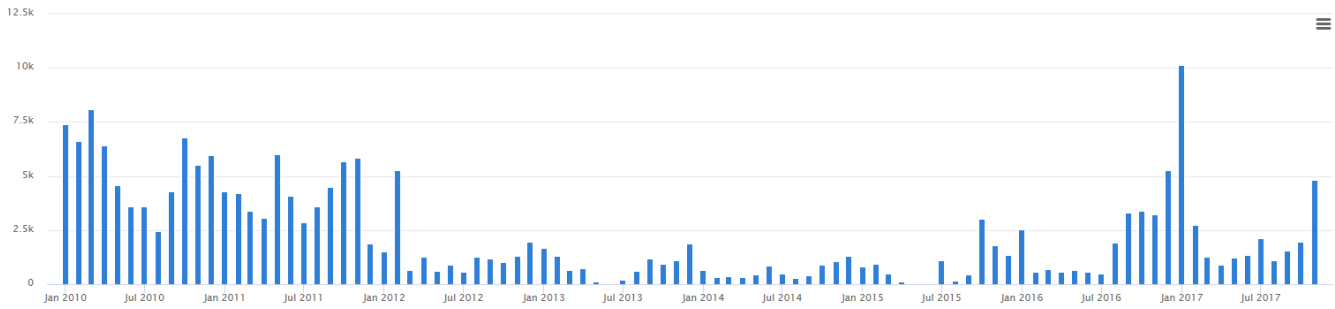
Power plant and option Report

Plant Value	Name	DE Intrinsic €/MWh	DE Simulation €/MWh	UK Intrinsic £/MWh	UK Simulation £/MWh	FR Intrinsic €/MWh	FR Simulation €/MWh
	Coal 46%	4.85 ↑	7.65 ↑	5.72 ↑	7.07 ↓	10.64 ↑	12.59 ↑
	Coal 46% option	7.72 ↑	10.14 ↑	8.67 ↑	9.82 ↑	13.53 ↑	15.15 ↑
	Gas 60%	2.64 ↓	5.87 ↓	7.32 ↓	8.49 ↓	7.17 ↓	9.52 ↓
	Gas 60% option	3.20 ↓	6.27 ↓	7.89 ↓	9.08 ↓	7.65 ↓	9.88 ↓

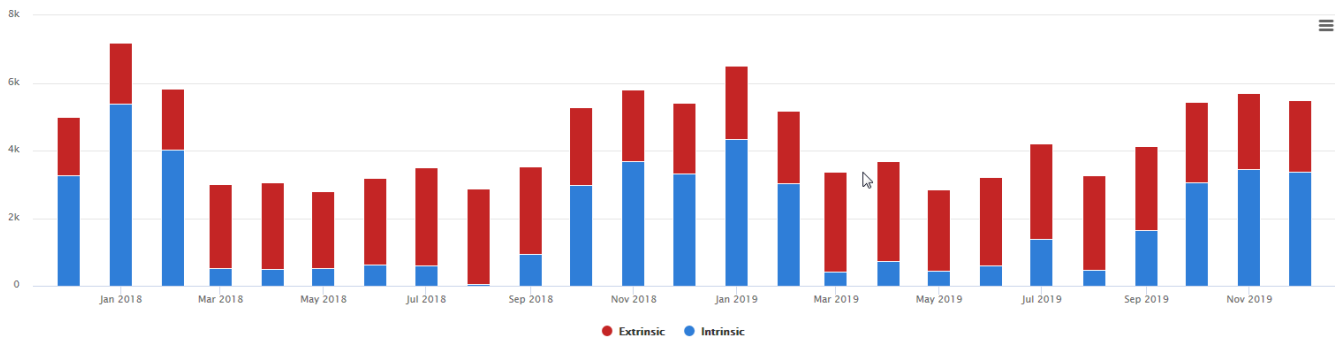
Remarks

- The valuation date for the analysis is 30 November 2017.
- Volatilities, correlations and other parameters are calibrated on 2 years of historical price data.
- The main assumptions for this analysis can be found at the end of this document.
- Cal-18 gas prices were up during November (+1.0 EUR/MWh or 2.5 p/th), with coal and power mainly trading sideways.
- This resulted in general to a decrease in expected values for gas-fired generation and an increase in value for coal-fired generation
- Due to the start-up costs, the effect of an increasing Cal-18 UK clean dark spread was not leading to better results for the UK coal plant product.
- During November 2017, German spot peak power prices increased to levels of last winter. Realized income for the two German power products showed therefore a big improvement over previous months and reached levels not seen since January 2017.
- The other two graphs on page 2 show the expected future values of these German power products. They show a similar pattern as the realized income, with much less income in the summer than the winter. In both seasons, a considerable part of the value is extrinsic and dependent on a certain level of price volatility.

Realized value for the Gas 60% plant product (German market, value per MW)

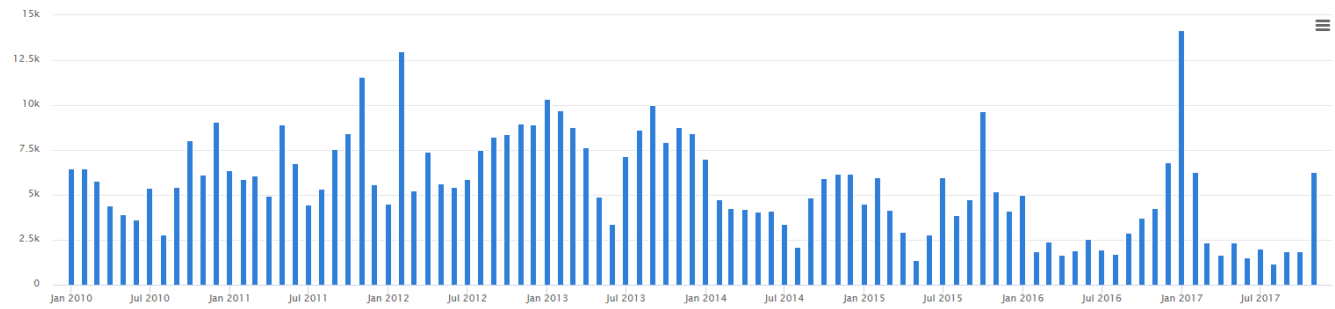


Estimated future value for the Gas 60% plant product (German market, value per MW)

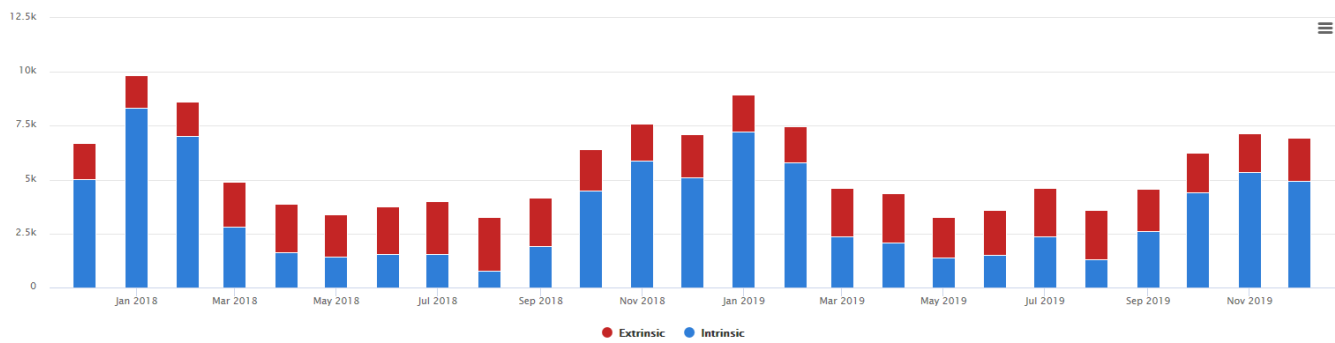


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Realized value for the Coal 46% plant product (German market, value per MW)



Estimated future value for the Coal 46% plant product (German market, value per MW)



Kyos Energy Consulting

Explanation

All valuations have been performed with KYOS software, in particular KyPlant and KySim. Simulation values are the average across a large number of Monte Carlo price simulations and using the least-squares Monte Carlo methodology to derive the optimal dispatch (exercise) of the products.

All plants and option products have a maximum capacity of 1 MW, at which they reach the maximum efficiency. The reported values in the table are for calendar year 2018. The 'option' products are strips of hourly clean spark or dark spread options, with no start costs and a single efficiency.

The other two products are more like real plants: they have start costs of EUR 30 (GBP 25) for coal and EUR 12.50 (GBP 11) for gas. Furthermore, to avoid a start, they can produce at 0.5 MW capacity at an efficiency which is 6% point lower.

The variable costs per MWh are EUR 3 (GBP 2.60) for the coal plant, and EUR 2.50 (GBP 2.15) for the gas plant. The coal plant also faces coal transport costs of 10 EUR (GBP 8.60) per tonne.

No other plant operational, investment or financing costs are assumed. Nor did we include maintenance, trips, minimum on- and off-times, ramp rates, etc. All these features can easily be modelled by KyPlant, but for simplicity are left out from this report.

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