Marlin Energy Trading Simulations

Long Term Energy Markets Simulation (German Market)

Overview

The German Long Term Power Market is seen as one of the most influential in Europe. Lignite and Coal still form a critical part of the German generation mix and will do so for years to come.

With the push towards a low carbon future, trading a coal fired power station in today’s markets is a volatile and uncertain situation.

This complexity, volatility and uncertainty has been modeled into the German long term markets simulation.

The simulation models a LCPD opted in coal power station operating in the German market and the users objective is to hedge / back-to-back / complete the three legs.

Credit plays a key role in the simulation (as it does in real life) and the user is constrained by the amount of credit that they have with counterparties. The user has the choice not to trade with counterparties and the counterparties can also decide not to trade with the user.

Emissions are also a key factor in the decision making for the user. The simulation can be configured to model Phase II or Phase III of the EU ETS. NOx and SOx limits are also modeled into the simulation and can also used to influence the decision making.

The user must optimally manage a coal stock pile and ensure that they do not end up in a situation where they are forced to buy or burn.

Market messages are also sent to the user that they must interpret to establish the likely impact on the forward market prices.

While adhering to these constraints, the user must sell their station into the power market, procure coal and CO2 certificates (when necessary) and gain a profit that exceeds the annual fixed costs for the station for the year. The simulation allows for users to speculate.

Each scenario lasts 45 minutes and gives users a fantastic overview of the long term market. Workshops can be run as half or full day.

Summary Screen showing dark spread information as well as all stock, emission, credit and energy positions.

The Power Trading Screen where users can trade peak or baseload products. Counterparty credit information is also detailed to allow user to make informed trading decisions.

The Coal Stock and Purchasing screen where users schedule the plant and see the resulting emissions and stock usage based on the profile that they are running through a month.