

Software Solutions Revolutionise Emissions Trading

JEAN-CLAUDE RISS, Managing Director of OpenLink's London operation, discusses how traders can help support the Emission Allowance, and optimise trading by controlling risk and ensuring straightforward management of emissions compliance obligations by employing online STP solutions.

NEW DEVELOPMENTS IN online trading software have made energy trading easier and more dependable, especially for emissions trading. In order to understand the flexibility and comprehensive power of an effective software solution, it is essential to have a good understanding of the limits and strengths this powerful technology can bring.

Online trading software solutions provide a complete European emissions model that integrates front-, middle- and back-office functionality into a programme that supports the whole life-cycle of Emission Allowances. This model can be seamlessly integrated into other trading paradigms to create a powerful cross-commodity trading, risk management, and settlement system. Becoming comfortable with it can mean the difference between trading failure and trading success.

Since January, the EU Emissions Trading Scheme (ETS) has created a new commodities market whose limits have yet to be fully tested. Spanning all 25 member countries, the first phase of emissions trading lasts until 2007 in an effort to reduce EU levels below 1990 levels for the Kyoto period 2008 to 2012. With a multibillion-Euro trading market, a customised online trading solution is not only crucial but also an essential part of any successful participation level.

➤ Online trading software solutions provide a complete European emissions model ... <

The volume of interested parties is already large and will continue to grow. The Scheme includes 12,000 to 16,000 installations, which collectively account for 40% of the EU's emissions. The general idea is that installations whose emissions fall below compliance standards will put their credits on the market for purchase, either by installations whose emissions are higher than the limits, or by private environmental groups who want to lower the number of available credits altogether.

The benefits of emissions modelling software are four-fold: it boosts functionality in the areas of trading, risk analytics, position and inventory management, and back-office infrastructure control

A solid straight-through-processing (STP) system supports the capture and trade of emission allowances, as well as the modelling of actual and forecast emissions. Special input screens target emission specific market requirements.

As a result of its seamless integration into other modules, online emissions modelling and trading software facilitates sophisticated middle-office functionality by providing mark-to market (MTM), P&L, Value at Risk (VaR) and scenario analysis.

The software's robust position and inventory management functionality enables tracking of current and future compliance account inventory and net positions for each compliance year and the corresponding compliance period, while presenting results in position pages.

Additionally, the record-keeping capacity of such software must provide sweeping back-office functionality that allows the generation of confirmations for CO₂ transactions and invoices. A separate registry notification report would be included to facilitate timely registry transfers.

Back-Office Functionality

One of the leading benefits of European emissions modelling as integrated into online trading software is the access to complete back-office functionality, including operations services, event concepts, and the processing of documents.

A good STP software solution should support the document generation of confirmations and invoices for the tradable CO₂ Emission Allowances, and inventory reports must be included in an end-of-day workflow to track the whole history of the Emission Allowance process. An execution report for Registry Notification must also be generated, ensuring that Registry Notifications are created and submitted to facilitate timely delivery of allowances on the agreed delivery date.

Risk Analytics

Online emissions modelling and trading software leverages both sophisticated middle-office functionality and the flexibility of a real-time position manager module. Such a module provides full evaluation of features such as the calculation of MTM, P&L, and VaR, sensitivities, and scenario analysis.

Trading

While an STP software solution enables traders to efficiently trade emission allowances in the European market, it also can do a lot more. The set-up should ensure the straightforward management of emission compliance obligations and support the capture of three different transaction groups:

- Initial government emission allocations, supporting the modelling of initial allowance positions assigned

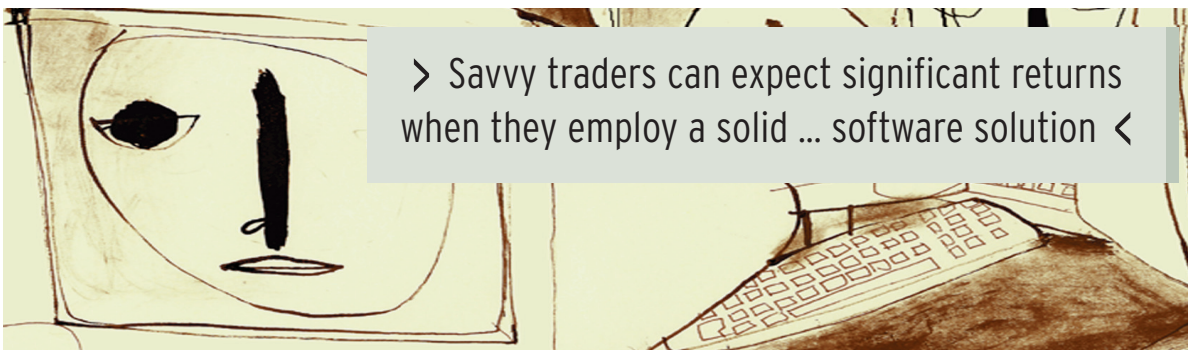
by each government's national allocation plan.

- Internally forecast and actual emissions, updated continuously to represent both expected and actual emissions by generation assets.
- Day-to-day trading activity in the European allowance market, with sufficient trading functionality and flexibility to account for different allowance types, such as AAU, CER, and ERU for the CO₂ market.

Emissions modelling software provides specific deal input screens, a set of instrument templates, and even an emission-specific instrument type.

Position & Inventory Management

Middle-office position and inventory management reports allow risk managers to optimise and control day-to-day trading. In addition, the configuration offers straightforward monitoring of corporate compliance



obligations. To ensure effective inventory management, the software supports the modelling of CO₂-specific government regulations such as banking and borrowing.

The software should also include a standard position page that tracks inventory and net positions of emission allowances. Additionally, the net positions for each compliance year as well as for the total compliance period should be displayed. The report needs to detail the allowance position that is available for surrender at the 30th of April for the following year to fulfil the previous year's emissions obligation. The MTM results for each position shown should also be provided.

The daily inventory should be calculated to track today's real-time positions in emission allowances. This daily inventory position will be equal to the emission allowances that are available for transfer in the registry compliance accounts. The calculation of the inventory position is based on a customisable script, which is included in the software package, while the market value of today's inventory position is provided by the real-time position manager's standard position page.

The valuation of each position and today's inventory is supported by an emission-specific valuation curve included in the overall functionality, better known as the valuation approach. Additional information is provided by a separate future inventory report. This report allows traders to manage company inventory on compliance account level efficiently and shows the daily inventory for future business days. This also enables the tracking of short compliance account positions to optimise trading

and helps to ensure that open positions are closed out before a future delivery obligation. The calculation of future inventory positions is a script included in the overall package.

The Future

The EU ETS already has the attention of several different exchanges that either specialise in emissions trading or are bending to accommodate it. The biggest problem currently facing interested trading houses is reorganising their internal structure to successfully take advantage of this new commodity.

Another challenge involves the lack of standardisation among emissions trading contracts. The terms of the International Swaps and Derivatives Association, the International Emissions Trading Association, and the European Federation of Energy Traders are all sufficiently different to expose traders to basis risk.

To avoid such risk, futures trading exchanges such as the European Climate Exchange (ECX) (a subsidiary of the Chicago Climate exchange) offer electronic trading under the ICE Futures infrastructure, and are therefore regulated by London's Financial Services Authority. An increasing number of exchanges are also competing for space in the market.

The emissions market has already started to grow exponentially and will continue to expand as the EU continues to become more comfortable with the programme and starts to see regulatory results. Savvy traders can expect significant financial returns when they employ a solid front-, middle-, and back-office software solution that will support the whole life cycle of Emission Allowances and optimise trading by controlling their risk and ensuring straightforward management of emissions compliance obligations ■

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Founded in 1992, OpenLink is a leading provider of trading, risk management, and operations software solutions. Its Next Generation eXtensible (NGX) platform supports the most rigorous business requirements of firms trading in energy, interest rate derivatives, fixed income securities, foreign exchange, money markets, metals, and soft commodities.

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