

## › Solution Brief



### Business Impact

“With increased volatility in oil prices and natural gas becoming a global commodity, companies trading in energy commodities are refocusing on ETRM software to identify value from their portfolio and hedge against risk.”

*IDC MarketScape: Worldwide Energy Trading and Risk Management Software 2015 Vendor Assessment, Jill Feblowitz, April 2015*



### Challenges

- **Manual processes.** Storing deal and position data in separate systems and spreadsheets slows the consolidation of exposures.
- **Inconclusive analyses.** Lack of advanced analytics thwarts reliable portfolio situation analysis and what-if scenario building.
- **Ineffective software integration.** Transaction volumes and data flows from new external and internal resources overwhelm currently installed CTRM software.
- **Unstructured data.** Combining tables using nonstandardized data scattered across the enterprise produces inefficient data manipulations.

## Nimble risk management for a volatile energy market

### The Issue

Oil and gas companies know that price volatility is the norm. Significant fluctuations in oil prices vividly highlight the value of nimble, reliable risk management and scenario analysis. Given the complexities that affect the direction and pace of commodity price changes – from economic impacts on industrial supply and demand to weather variations altering storage injection and withdrawal patterns – a risk manager must maintain a constant state of adjustment. In-depth analysis of net exposures and simulations of future shifts are a daily reality in this fast-paced market.

Measuring and managing risk of the individual commodities in your energy portfolio is a challenging task in itself. But the difficulty is magnified when you use a different application to manage each separate commodity and refined product. Trading organizations need up-to-date visibility into production, storage and consumption at the wellhead, pipelines, refinery tanks and pumps. They need to be able to apply analytics to a consolidated data set so they can predict changes that affect each of these factors. To manage this complexity, trading organizations need reliable real-time data aggregation and advanced analytical capabilities.

### Our Approach

A commodity trading and risk management (CTRM) solution from SAS combines advanced analytics and superior data management with deal-capture capabilities for the full range of energy commodities and transaction types. We provide software and services to help you:

- **Centralize risk modeling and reporting functions** by consolidating exposures across business units and trading books into a common risk data store.
- **Streamline regulatory compliance** via a secure, auditable database that stores your critical proprietary algorithms with both the flexibility of spreadsheets and appropriate internal controls.
- **Reduce reliance on spreadsheets** and bolster risk modeling and reporting by managing commodity data with a holistic approach.
- **Track current and potential risks** using advanced analytics to run a full range of exposure analysis metrics (VaR, PFE, CFaR, EaR, etc.).

SAS helps you proactively capture, analyze and simulate market data so you can better measure and manage the impacts of severe price volatility, regulatory compliance and diverse, nonstandard data.

## The SAS® Difference: Advanced deal capture, risk analysis and simulation

SAS streamlines the process of deal capture, enabling quick and accurate assessments of market and credit risk. The same data is simultaneously available for scenario modeling and advanced analytics. With SAS, you get:

- **A complete risk management solution** that manages multiple commodity portfolios of any size or complexity. The solution enables deal capture (any energy commodity, any transaction), and physical and financial position reporting. It also provides market risk and credit risk analytics – with an array of reporting options – that help risk managers monitor overall exposure. And it offers specialized features for crude oil, natural gas and other markets.
- **Superior data management capabilities** that ease access to standard, trusted data regardless of computing platform or location. The solution can transport data automatically and seamlessly between a centralized data store and any external data source (general ledger, logistics, price quotes, credit ratings, treasury system, operations, swap data repositories, etc.).
- **Domain expertise** and in-depth industry knowledge derived from SAS' long history in the CTRM market.

SAS makes it easy to integrate with your enterprise systems to provide a link between risk and trading functions and other business areas. Analytics, simulation and data management capabilities are incorporated into the risk data model, so you can take full advantage of our advanced risk management capabilities.

## Case Study: A large US gas and integrated oil company

### Situation

Volatile energy commodity markets have created uncertainties for production and hedging practices, not to mention sales outcomes. In response, this company identified a clear need for improved scenario planning, demanding that its systems provide fact-based knowledge of potential marketplace outcomes for the purpose of managing earnings per share and other financial measures.

### Solution

SAS delivered solutions that enhanced the business intelligence and analytics available to decision makers, including:

- Cash flow measures, revenue-at-risk models, scenario analysis, credit metrics and stress testing.
- Automatic daily VaR calculations.
- A flexible reporting environment, including integration with Microsoft Office.

### Results

With the SAS solution, the company was able to:

- Use its investment in the SAS trade capture system to validate source data and expedite results.
- Enhance business strategy with proactive management strategies that substantially improved VaR and MtM calculations.
- Enable proactive business management capabilities, transcending VaR and mark-to-market calculations of the past.

### What if you could ...

#### Simplify data access

What if you could make it easy to access standard, trusted data through automatic data integration, reducing human intervention and improving data quality and timeliness?

#### Visualize exposure

What if you could generate timely, accurate measures of current and potential risk exposure, then present decision makers with clear, dynamic, explorable visualizations?

#### Strengthen analytics

What if you could decrease reliance on spreadsheets while retaining the ability to value portfolios and run ad hoc market sensitivity analysis, without disrupting business operations?

#### Streamline compliance

What if you could automate reporting and audit functions to simplify regulatory compliance obligations?

**You can. SAS gives you THE POWER TO KNOW®.**

### SAS Facts

- SAS helps customers at more than 75,000 sites improve performance and deliver value by making better decisions faster.
- SAS has more than 200 unique oil and gas customers across 35 countries, including all six supermajors.
- SAS consistently ranks among the market leaders in analyst surveys of CTRM solution providers.

Learn more about SAS software and services for oil and gas at [sas.com/oilgas](http://sas.com/oilgas)