



**Rockwood Energy Search LLC**

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## **Senior Quantitative Analyst Recruiting Profile-Job 1704ws**

### **General Background:**

Client is looking for an experienced, sophisticated analyst to be responsible for quantitative and analytical model design for a large, multi-product risk group. This person would be the lead analytical resource.

This role is responsible for designing, implementing and maintaining risk measurement and valuation models, including forward price curves, correlation matrices and volatility surfaces.

The position is located in the metropolitan New York area.

Clearly a responsible position, it has both the responsibilities of a highly visible position and the opportunities available to such a person.

### **Responsibilities**

Develop, validate, and maintain risk and valuation models. These duties will cover both legacy and new models.

Create methods and processes to ensure data integrity and accuracy, with observable quality control mechanisms at all levels of calculations (e.g. inputs, conversions, data mapping, intermediate calculations, and final results.)

Create and maintain forward price curve models that extend liquid curves beyond the last traded contract, fill in missing contract months, add seasonality to flat-traded periods, and always converge back to the market price inputs.

Establish valuation methodologies for new structured products.

Create and maintain volatility surfaces for broad array of energy options.

Create tools for submitting data to and analyzing data from third-party consensus data providers such as Markit Totem, Yellow Jack and ICE.

Create and implement scenario and stress testing in all valuation and risk processes.

Implement correlation analysis with special focus on time spread and geographic basis risk.  
Create potential credit exposure models to assist Credit Risk staff evaluate the impact of proposed transactions.

Review code documentation for proper model implementation, including the possible simulation of results, modeled parameters, policies and procedure updates for Market Risk Controls.

Identify processes and programming projects that are candidates for outsourcing.

Create, test and continuously update Standard Operating Procedures documents for purposes of quality control and business continuity.

## **Qualifications**

A capacity for critical thought and ability to communicate with broad range of people about complex issues.

5+ years experience as an quantitative analyst with the energy market, specializing in a risk, valuation, or modeling function

Familiarity with the entire energy complex with a focus on crude, products, power and natural gas.

Strong understanding of stochastic calculus & applied mathematics, derivatives (futures/swaps/options), and risk measures (e.g., Greeks, volatilities, correlations, Value-at-Risk, stress testing)

Experience with implementing models to adapt flat or incomplete market forward price data to create a model-based forward price curve which correctly completes missing months, adds seasonality to flat pricing periods, and extend the curve beyond the last traded contract.

Expertise in energy option valuation.

Complete familiarity with all alternative approaches to calculating Value-at-Risk (VaR) and a demonstrated ability to understand the benefits and weaknesses of the various approaches.

Proven ability to design and implement robust technology solutions that are transferable to be used and conducted by other staff members.

Demonstrated experience and interest in "hands on" modeling, which shall include quantitative modeling, research and programming skills in Matlab, SQL, and VB/VBA.

Familiarity with data cubes and the Star Schema approach to database management a plus.

Ability to use models and their documentation as prototypes and requirements documents for permanent systems to be implemented by IT staff.

## **Desired Qualifications**

Work experience greater than 8 years.

Familiarity with the broader commodity landscape, including electricity markets (including Financial Transmission Rights, Capacity Valuation, etc), agricultural markets, foreign exchange, interest rates, etc.

PhD in relevant specialty.

Experience with FEA, TriplePoint, Endure, Apollo, Tableau systems would be a plus.

Competence with C# and C++.

Experience with preparing, submitting and analyzing data to market consensus services (e.g. Market Totem, ICE, Yellow Jacket)

**Executive Search Contact:**

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