cQuant.io

Energy Analytics. On Demand.

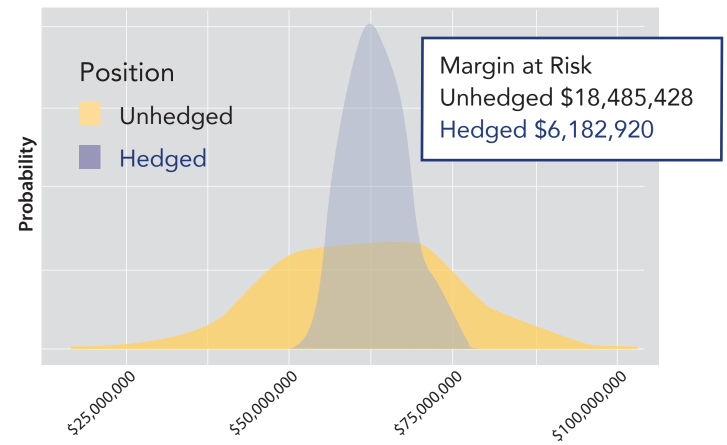
Superior analytic tools in the cloud.
Choose your models, design your workflow.
Take control of your analytics.

Take Control of Your Analytics

- *Leverage the power of cloud computing*
- *Choose from a wide range of analytic models*
- *Automate your analytic workflow*
- *Share results across teams*
- *Generate custom reports*

cQuant makes energy analytics easy. Choose analytic models to fit your portfolio and link them together in customized workflows. Complete your work faster with cloud computing. cQuant's web application manages everything else including hardware, storage and job scheduling.

Gross Margin at Risk (GMaR)



Gross-Margin-at-Risk (GMaR) for energy portfolios. Produce reports for physical assets and financial positions. Calculate exposure, run scenarios and "what-if" analysis.

Your analytic models, all in one place.

Risk Management

With a full suite of risk management tools that complement any organization's energy portfolio, our risk solutions provide the insight you need to protect your organization from today's volatile financial energy markets.

Market Forecasting

Whether you're looking for price simulations to feed into downstream business reporting processes or a fully-integrated portfolio-wide future cash flow analysis, cQuant's market forecasting solution allows you to simulate and visualize key trends in market prices and uncertainty down to the sub-hourly level.

Asset Valuation

cQuant's simulation-based methodology combines detailed operational parameters of assets with market-based analysis for granular valuations of thermal generating assets, wind and solar farms, storage facilities, and full or partial requirements load contracts.

Renewable Energy

With detailed project-specific analysis, granular simulation-based methodology, and intuitive reporting, we ensure that your organization can keep pace with the fast-changing renewable energy market.

Trade Analysis

In today's energy markets, having sub-par analytics is not only a competitive disadvantage, it's a financial liability. cQuant's trade analysis solution provides the analytical power and operational speed your organization needs to value trades quickly and accurately.

Risk Analytics Suite

cQuant.io provides a range of risk analytic solutions for every energy portfolio. Whether your portfolio contains thermal power plants, renewable generation, storage assets, power purchase agreements or retail load, our risk analytics suite can help you to calculate exposure and design risk mitigation strategies that work.

cQuant.io's Risk Analytics Suite provides energy companies with the ability to calculate:

- Mark to Market
- Value at Risk
- Cash Flow at Risk
- Gross Margin at Risk
- Net Position

cQuant utilizes advanced spot and forward price simulations, physical asset optimization, standard and complex contract valuation models to provide risk managers with an integrated view of their portfolio exposure.

Price Simulation

Generate calibrated Monte Carlo simulations for multiple price variables over a user-specified time horizon. Simulated prices reflect important correlative relationships between distinct price variables, allowing users to recover historically-consistent distributions of implied market heat rates, basis spreads, and other cross-commodity or cross-location factors. cQuant's methodology is ideally suited for simulating large portfolios of prices for cash flow reporting, generation dispatch, asset valuation, and hedge optimization applications.

Physical Asset Optimization

Thermal, renewable and storage assets can be modeled utilizing detailed characteristics and constraints, allowing users to represent realistic operational behavior. For example, thermal assets can be modeled using over 50 parameters including emissions, dual-fuel capability, and multi-unit dependencies. In all cases, physical assets are optimized and valued at the hourly level for statistical reporting.

Contract Valuation

Calculate value and risk sensitivities for a range of standard traded instruments and complex structured transactions, including various swap types, option types, index physicals, power purchase agreements, heat rate call options and revenue put options.

Risk Analysis & Reporting

Generate MtM, VaR and GMaR reports on your entire portfolio including physical and financial assets and positions. Easily conduct sensitivity, scenario, and "what-if" analyses. Automate your analytics in a scheduled batch process or perform ad-hoc analysis. Stay in control of your data with results provided in formats directly-consumable by Microsoft Excel or any other business intelligence tool.

Available Models

- Spot Price Simulation
- Forward Price Simulation
- Basis Simulation
- Weather & Load Simulation
- Nodal Forward Curve Generator
- Thermal Generation
- Wind & Solar Generation
- Hydro Generation
- Battery Storage
- Gas Storage
- Demand Response
- Contract Valuation
- Mark-to-Market (MtM)
- Value-at-Risk (VaR)
- Net Position Reporting
- Cash-Flow-at-Risk (CFaR)
- Gross-Margin-at-Risk (GMaR)
- Portfolio Delta/Gamma/Vega

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Services

cQuant.io offers targeted consulting services at affordable rates by utilizing our analytic models and powerful application. Access our team of PhD quants and energy analysts for:

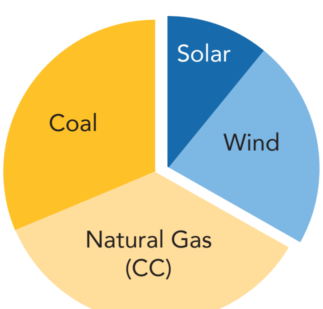
- *Asset valuation*
- *Renewable PPA valuation*
- *Hedge optimization*
- *Risk assessment*
- *Model development & validation*

Energy Portfolio Services

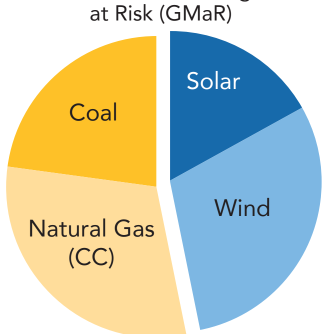
cQuant's Energy Services team can provide you with targeted analysis of your portfolio. Energy portfolios with physical assets and financial contracts demand an integrated understanding of how day-to-day physical operations couple with uncertainty in financial markets for power and fuel.

The particular characteristics of each asset and the terms of each contract dictate value, often in real time, as generation and market prices fluctuate.The effect of each individual component on the value and risk of the broader portfolio can be complex.

Share of Gross Margin



Share of Gross Margin at Risk (GMaR)



Targeted Analysis

- Forecasts expected monthly generation, fuel burn, and gross margin, as well as uncertainty around the expected value.
- Provide an integrated view across both physical assets and financial contracts, enabling users to view of results at the total portfolio level or drill down through more granular views all the way to the individual asset/contract level.
- Report monthly and annual cash flow and cash flow at risk (CFaR) for any user-defined peak period at the portfolio-level and for individual assets.
- Easily define scenarios on future prices, physical/financial portfolio components, and market dynamics to assess effects on portfolio value and risk.
- Assess the effectiveness and risk reduction value of prospective physical and financial hedges.

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