



# DOMINION

Managing risk, generating rewards with SAS®

## Industry

Energy and Utilities

## Business Issue

Increase profits and manage risk in the volatile energy marketplace.

## Solution

SAS® Risk Management gives executives and traders at Dominion the information they need to make knowledge-based decisions within their boundaries of risk.

## Benefits

SAS® provides the analytical power that helps Dominion achieve greater profits and dominance in the marketplace.

In the new energy marketplace, the transition from old-line utility to modern energy company means close monitoring of commodity trading, oil and gas production, power generation and transmission, and energy marketing to customers in dozens of markets. The risks can be high, but the potential rewards are great. With SAS Risk Management, Dominion prepares to reap the rewards.

Dominion, with headquarters in Richmond, Virginia, is one of the nation's largest energy producers. The company maintains a power-generation portfolio of more than 21,000 megawatts, one of the largest independent natural gas and oil production companies, a major pipeline and the nation's largest underground natural gas storage system. It has annual revenues of US\$10 billion. With these and other assets, Dominion serves nearly 4 million retail customers throughout the eastern United States.

As it evolves and expands in today's deregulated marketplace, Dominion confronts an environment of unsurpassed change and volatility. "The energy industry is in a very important evolutionary state right now," explains David Jewett, IT Manager for Dominion. "We're changing from an industry dominated by utility companies to an industry that has lots of energy marketers coming in. Learning to be competitive in this changing industry involves a new way of looking at risk and seeing risk as an opportunity that needs to be exploited."

Dominion employs a wide variety of risk management techniques aimed at exploiting risk to the company's

advantage. "A major issue for all energy companies is risk management," says David Holden, Vice President of Risk Management. "That's because we manage commodities across a broad spectrum that includes gas, oil, electricity and coal."

Part of managing risk for this portfolio means understanding that a hurricane in the Gulf of Mexico or a mild winter in New England can affect energy prices nationwide. Variations in customer demand, power production and energy costs are among the many variables that can affect earnings at Dominion.

To stabilize the impact, analysts at Dominion employ new technologies that construct predictive models and what-if scenarios. These models reveal the potential business effects of countless combinations of events. Dominion executives can then devise business strategies and commodity trading plans that not only limit their business risks but also allow them to exploit risk to the company's advantage.



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### Good data delivers good answers

According to risk management analyst Joe Cooper, advanced risk analysis requires a lot of data. "One of the hard



“We look to this SAS solution to really be the foundation on which we base our decisions and to provide the analytical horsepower to evaluate those decisions after the fact.”

**David Holden**

Vice President of Risk Management  
Dominion

things about risk management is that you need data. You need information about your company from a thousand different places,” says Cooper. In fact, a single risk model might require information about production plant gas consumption, hourly energy usage, customer demand per region, and future demand given different weather scenarios and rate changes.

“Before Risk Management, we had to collect all this data in a hundred different programs,” says Cooper. “Integrating this data was very difficult, but Risk Management has allowed us to connect to these different data sources and bring the data together for risk analysis.”

Using SAS Risk Management, Cooper and other analysts at Dominion create daily and monthly reports for the company’s business executives and calculate specific risk statistics for commodity traders and operational employees.

In addition to these static reports, the system delivers a full view of the company’s risk portfolio via the corporate intranet. Security is tight, but those executives and managers with access can discover up-to-the-minute information about the company’s risk picture.

“Our chairman can look at a report that gives him a snapshot of the entire risk portfolio of our business, and he has drill-down capability to see each business unit’s contribution to that larger risk picture,” Holden says. “The executives responsible for each business unit can look at their specific risk picture and understand how it contributes to the larger risk profile for the organization. And they can drill down as well to find out how each individual transaction, trade or region contributes to their business unit’s risk.”

**The value of risk management**

Not only does SAS give Dominion access to new techniques for data modeling and analyses, it also supplies answers more quickly than ever before. “What used to take us weeks, now takes us days or hours or minutes,” says Cooper. “And obviously when our managers get this information, they’re able to act on it. It’s real in terms of our business; it has real consequences for us.”

“Risk Management gives us much faster data manipulation and analysis than we’ve had before,” Holden says. “So instead of knowing what happened the next day, we can know it 10 minutes later, or whatever is needed.”

Time is of the essence on the trading floor. The quicker Dominion traders get information, the quicker they can make trading decisions. And with an immediate activity like trading, systems that support that speed are essential.

According to Holden, data quality is also essential on the trading floor. “Risk Management permits us to use far more sophisticated evaluation methodologies. We have greater confidence in the reliability and validity of the outcomes in analytics.” And, he says that confidence allows Dominion to convert opportunities into cash through profitable buying and trading decisions.

“Risk Management is flexible and customizable,” Holden says. “It allows us to take a very solid core product and customize it to our own business, our own needs and our own ideas about what risk management is. Without a doubt, Dominion is making better business decisions based on our enterprise risk management systems.”



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