

FERC REGULATION AND MARKET BASED RATES "Challenges and Opportunities"

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Rob Smith - Principal - Financial, Rates & Regulatory - GDS - Marietta, GA

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June 16, 2004 marked the commercial operation of the 140 MW Nebo Power Station, the first natural gas-fired combined cycle plant in Utah.

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Rachael Harms - Associate Analyst Hi-Line Engineering, LLC - Auburn, AL

Congratulations go out to the first two candidates to complete and be certified in the Comprehensive Certified Staking Technician Program.

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IDEAS WANTED!

We want to hear your ideas, feedback, and suggestions for this newsletter.

Email us at:

info@gdsassociates.com

Utilities and other power sellers who desire new or renewed authority from the Federal Energy Regulatory Commission ("FERC") to sell wholesale power at market based rates, must prove that they lack the ability to influence the price of power in the utility's control area and surrounding markets. Recently, the FERC announced new tests that sellers must perform in order to determine if they wield this "market power." The new tests were described in FERC's April 14, 2004 Order in **AEP Power Marketing, Inc. et al.** In that Order, the FERC describes two new "screens" that it will use to evaluate generation market power. If applicants fail the screens, they either have to propose measures to "mitigate" their market power, or they only can sell power under cost based rates. If they pass the screens, FERC will grant the application for them to sell power at rates reflecting what the market will bear.

The Challenges:

The two screens, the **Pivotal Supplier Analysis** and the **Wholesale Market Share Analysis**, are complicated algorithms which attempt to improve on FERC's efforts to determine whether a seller's generation is "pivotal" in the marketplace. FERC does not want to allow a "pivotal" supplier/seller to withhold some of its generating capacity supplies in the market at peak times in order to raise prices, and then reap those higher prices under market based rate sales. While the application of the new screens are verbally described in the body of FERC's order, the devil is in the details and the real-world development and application of the algorithms are anything but clear. The new tests require a tremendous amount of data and data manipulation across each and every control area where an applicant has generation and/or load. For example, the "simultaneous" transmission import capability for a control area is a measure of transmission import capability, and can be a crucial input into the screen algorithms. As you might imagine, this type of analysis requires data and transmission studies that are difficult to develop in a timely manner. In fact, the uncertainty surrounding the application of the tests and the availability (or unavailability) of data has prompted several sellers to request extensions of time to make the required filings. Those asking for extensions include large investor owned utilities who presumably already have the access to the very data that are used in the studies. Their requests for extensions suggest that they, too, are struggling to comply with the complicated tests in FERC's order.

The Opportunities:

The new rules also present opportunities for wholesale customers to challenge a utility's Market Based Rate authority (Market Power) when those utilities file for re-certification. High short-term and longer-term wholesale prices over the last few years in historically low cost control areas call into question whether the cost of generation has truly increased, or whether sellers of generation are reaping the benefits of Market Power. Wholesale customers will have the right to evaluate and challenge the screening process and may be able to force utilities to sell at lower, traditional cost-of-service based rates in the future. Customers need to be diligent in preserving their rights as utilities file these new screens over the next year or so.

GDS along with the Washington D.C. law firm of Miller, Balis & O'Neil P.C. has recently assisted the Wabash Valley Power Association with what is believed to be the very first approval of Market Based Rate Authority under these new rules. Wabash Valley is an Indianapolis based FERC regulated G&T Cooperative that provides wholesale electricity to 27 distribution systems in Indiana, Illinois, Michigan and Ohio.

The Wabash Market Based Rate request required the application of the two new screens in each of the utility's eight control areas. Needless to say, the newness of the screens (and no clear template for processing the data) along with the complicated nature of the multiple control areas, made the development of the tests a challenge. Nevertheless, Wabash's application was approved and took effect July 1, 2004.

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At Risk...

Demand-Side and Fundamental Business Risks

This article will complete our three-part series on "risk management" by focusing on the demand-side factors that can make it difficult to supply both reliable and cost-effective power. These demand-side risks fall under one of two categories: **1) Forecasting**; or **2) Load**. We will also discuss some of the fundamental business-related risks that affect the everyday operations of your business. These fundamental business risks fall under one of the following categories: **1) Regulation**; **2) Financing**; or **3) Management**. In addition, we continue to apply a framework that can help you identify and mitigate these demand-side and fundamental business related risks.

Forecasting

One of the first tasks of power supply planning is determining how much energy and capacity will be required to serve your utility's customers. After all, you need to have a very good idea of your power supply needs to effectively search for a way to meet them. This is why a load forecast can be so critical to both the administration of a well-balanced portfolio of power supply resources and the creation of a comprehensive risk management strategy.

The accuracy of a peak demand and energy sales forecast generally depends upon two primary factors: **1) the ability to quantify the impacts of influential variables on power requirements**, and **2) the skill to project changes in these key influential variables** (e.g. economic outlook, weather conditions) over the forecast horizon. A utility's base case forecast typically presents the load and energy projections corresponding to the expected, or most probable, outcomes of the key influential variables. Of course, it is inevitable that future changes in the factors that influence power requirements will deviate to some degree from what was assumed when the load forecast was prepared. Therefore, it is best to develop forecast ranges that address high and low range scenarios.

Range forecasts are useful for providing power requirement estimates for extreme or specific market influences. However, range forecasts do not necessarily provide probabilities for a range of projected power requirements outcomes. Software tools available today provide the means for developing probabilistic forecasts, where probabilities can be assigned to a distribution of projected load and energy values. The power supply planning is enhanced tremendously when the load forecast can be presented as a probability distribution rather than as a series of single-point projections for each time period in the forecast horizon.

Load

Managing the uncertainty of your load is difficult at best, but that does not mean it is impossible. This can be a critical aspect of your business and it is important in helping to achieve your strategic and financial goals.

In order to mitigate the risk of abnormal loads, it is important to try to better understand the forces that can cause high variability. These drivers may include competition, catastrophic events, industrial activity, or technological issues. Some of these areas are almost impossible to predict, making it very difficult to mitigate such risks in a cost effective manner. Although not always easy, being up to speed on the competition in your market or being close to the specifics of larger industrial operations may prove helpful when negotiating supply agreements by avoiding or at least minimizing unnecessary "must-take" situations. You may also be able to exploit the savings from an interruptible product or other demand-side management program where appropriate. For utilities that are subject to weather extremes, there are opportunities available to hedge weather risk through the purchase of financial

hedges that are designed to help protect against this risk.

Regulation

As seen over the last several years, the structure of the utility business and the regulation that governs it is one of constant change. Regulation ranges from the Federal Energy Regulatory Committee ("FERC") or the Rural Utilities Service ("RUS") at the federal level, to Independent System Operators, Security Coordinators, Regional Transmission Organizations, Public Utilities Commissions at the state level, and even city and county governments at the local level. The sheer number of regulatory agencies, coupled with the uncertainty and magnitude of potential requirements that may be placed upon your business by these agencies, only increases the need to understand the regulatory risks faced by our industry today. Changes in the authority level of regulatory agencies, the time and resources required for litigation, new environmental and nuclear regulations, and market design and restructuring are only a few of the major regulatory risks that should be of concern. Staying abreast of the legislation and proceedings and getting involved with these agencies can be expensive and time consuming, not to mention seemingly fruitless at times as proposed changes come and go. Involvement with working groups or panels can be an effective way in ensuring your position is well represented, as well as gaining as much advance notice of potential regulatory risks that may affect your business.

Financing

Every business needs to borrow money at some point in time. Regardless of the purpose, you will desire to obtain financing under the most favorable terms and conditions possible. This is often hard to ensure, particularly because of the fluctuation in interest rates. It is impossible to know whether rates will get better or worse in the future, so a balanced, diversified portfolio of borrowing instruments often produces the most favorable results over time. Furthermore, due to the recent uncertainty in the energy industry, lending institutions are becoming more selective of which entities they lend money. Lenders are now performing more rigorous risk analyses on a borrower's financial condition to determine the long-term viability of the borrower or project and the ability to meet debt service payments. Equity requirements and debt covenants are also becoming far more stringent than they have been in years past.

Once the decision to obtain financing has been made, it is important to conduct "what if" scenarios to study what the impact of unexpected events could have on your business, as well as to understand if your business has the potential for financial distress. Ultimately, maintaining strong financials through proper rate structure and strong liquidity and equity levels are essential to ensuring the availability of low-cost financing for your organization in the future.

Management

The makeup of an organization can arguably be the most important factor in successfully operating a business. Integrating and processing all of the various operational inputs from your business to formulate a reliable and cost-effective power supply portfolio is more than a challenge. By taking a systematic approach to your business operations through better understanding the drivers that cause change in your business, and through the corresponding implementation of the suggested comprehensive risk management strategy, managers can take fundamental actions that can help mitigate more effectively the risks associated with their business. Additionally, creating management policies and controls that administer and measure your organization's performance can be advantageous

NEBO POWER STATION - Up and Running

GDS Associates is pleased to announce the **June 16, 2004** commercial operation of the 140 MW **Nebo Power Station** in Payson City, Utah.

The **Nebo Power Station**, which is owned by members of Utah Associated Municipal Power Systems (UAMPS), is the first natural gas-fired combined cycle plant to commence operation in Utah. GDS Associates acted as Owner's Engineer for UAMPS on the project, **which came in one day early and under budget.**

GDS also provided gas pipeline interconnection, fuel procurement, and acceptance test consulting for the project.

The duct-fired combined cycle project, which is cooled using treated wastewater, was developed under an Engineering, Procurement and Construction (EPC) contract between UAMPS and Colorado Energy Management (CEM). You can visit the UAMPS web site to view a 3D tour of the facility:

<http://uamps.com/payson1.htm>

For more information contact **Bruce Walter, P.E.**, Generation Support Services - GDS - Austin, TX at 512-494-0369 or bruce.walter@gdsassociates.com



CONGRATULATIONS TO CERTIFIED STAKING TECHNICIANS

Congratulations to **Todd Sherwood** of Douglas Electric Cooperative and **Benjamin Friederichs** of Big Bend Electric Cooperative for completing the **Certified Staking Technician Program** offered by Hi-Line Engineering in partnership with Northwest Public Power Association.



Todd Sherwood began working for Douglas Electric Cooperative in 1992 as a lineman. In 1996, he became a foreman, and in 2000, he transferred to the Engineering Dept. He is currently Project Coordinator for the Engineering Dept.

"As a lineman, I thought that the engineers were off their rockers with some of the construction that they were wanting us to do. Now I understand why... I would recommend this course to any one without prior staking or engineering experience."

Ben Friederichs is a Mechanical Engineer for Big Bend Electric Cooperative in central Washington State. His duties include line design, system improvements, processing of new service requests, some system modeling, upkeep and development of the engineering databases (Pole Attachments, Permits, Easements, etc.), and processing of Requests to Contact. He has been with the Cooperative for two years.



"This course offered an overview of most, if not all, of the areas that a Staking or Engineering Technician would be involved...and, as we know, a base of knowledge can make all the difference when approaching a problem."

Hi-Line partners with Northwest Public Power Association, Texas Electric Cooperatives, and Alabama Rural Electric Association to offer the **Comprehensive Staking Technician Certification Program** to attendees from utilities in over 15 states and Canada.

The goal of the program is to provide comprehensive training in the complex technology of staking. Staking combines both science and art to produce a set of plans and specifications by which a construction crew can build an electrical distribution line that will be safe, reliable, and efficient. The **Comprehensive Staking Technicians Certification Program** consists of 12 domains:

- Basic Surveying
- Overhead Structure Design
- Joint Use Staking
- Staking Sheets
- National Electrical Safety Code
- Easement Acquisition
- Obtaining Permits
- Line Inspection
- Underground Line Design & Subdivision Layout
- Construction Contracts
- Sizing Transformers & Conductors
- Basic Sectionalizing & Line Equipment

Students must attend seminars for each of the 12 domains, complete a test for each domain, and score at least 70 percent on each test. Many of the utilities supporting the program incorporate the milestones of the program into the company's review process for promotions and salary increases.

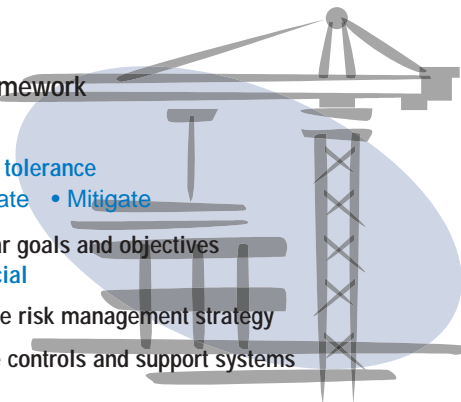
At Risk article continued... to the ongoing success of your business.

Conclusion

Over the course of the last three *TRANSACTIONS* we have introduced the idea of entity risk management and highlighted various ways in which it affects your business from the supply-side, to the demand-side, and to the business in general. It is clear that we are facing challenges and uncertainty like never before. With that said, there is no one "right way" to apply risk management principals to a business, or silver bullet solution that will protect any of us from uncertainty. Entity Risk Management is rather a methodology or approach that helps identify risks to your business, evaluate the potential negative impact those risks may have on your business, and create solutions to mitigate the potential damage. With new challenges, often new tools can be extremely helpful. We've summarized this suggested new approach below:

Risk Management Framework

1. Determine risk profile
 - Risk exposures and tolerance
 - Identify • Evaluate • Mitigate
2. Define program of clear goals and objectives
 - Strategic • Financial
3. Develop comprehensive risk management strategy
4. Implement appropriate controls and support systems



Article written by **Andy Holden**, Engineer Power Supply - GDS - Marietta, GA

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and we'll make sure they start receiving the next issue.



GDS Associates, Inc.
Engineers and Consultants

Mission Statement:

To help our clients succeed by anticipating and understanding their needs, and by efficiently delivering quality services with confidence and integrity.

GDS Associates, Inc. is a multi-service consulting and engineering firm formed in 1986 and now employs a staff of over 100 in five locations across the U.S. Our broad range of expertise focuses on clients associated with, or affected by, electric, gas, and water utilities. In addition, we offer information technology, market research, and statistical services to a diverse client base. The size and depth of our firm permits us to offer clients multiple sources of assistance, ensuring complete, competent, and timely service. Some of the consulting areas in which GDS has specialized skills are:

1. Power Supply Planning Services
2. Financial Analysis and Rate Services
3. Generation Services
4. Regulatory and Restructuring Services
5. Renewable Energy Resources, Distributed Generation, and Combined Heat and Power Services
6. Energy Efficiency and Demand-Side Management Services
7. Electric Planning and Design Services (Hi-Line Engineering, LLC)
8. Environmental Management Services (GreenLine Environmental)
9. Deregulation and Retail Energy Procurement Services
10. Utility Privatization Services
11. Water and Wastewater Utility Consulting Services
12. Natural Gas Consulting Services
13. Statistics and Market Research Services
14. Information Technology Services

GDS consultants are recognized leaders in their respective fields, dedicated to their clients, innovative in their approach to meeting unique challenges, and known for consistently being available when needed. GDS strives to develop long-term client relationships. Our goal is to be a wise investment in consulting services for our clients.

Hi-Line Engineering, LLC is a wholly owned subsidiary of GDS Associates, Inc. Hi-Line specializes in providing safe, reliable, and efficient planning and design for electric cooperatives, investor owned utilities, municipal electric systems, and the military in all types of terrain and all three NESC loading districts. Hi-Line's areas of expertise include:

1. Overhead Distribution Line Design and Staking
2. Underground Distribution System Design
3. Inspection and Inventory
4. Contract Administration
5. System Planning and Analysis
6. Right-of-Way Vegetation Management
7. GIS/GPS Mapping and Inventory
8. Training Services
9. Specialized Design Services

Hi-Line uses the latest technology to increase efficiency and accuracy. Our commitment to client satisfaction and diversity of expertise ensures that we provide the highest quality of service.

GreenLine Environmental, a division of Hi-Line Engineering, LLC, provides environmental services specially geared to the electric utility industry. GreenLine's staff is composed of registered foresters and ISA certified arborists. Our experience in both power line design and operation complement our expertise in vegetation management on right-of-ways. GreenLine offers the following services to utilities, municipals, developers, industry, and the military:

1. Right-of-Way Vegetation Management
2. GIS/GPS Mapping and Inventory
3. Environmental Assessments
4. Urban Forestry Consulting

Our goal is to use our technology and experience to provide efficient long-term control of trees and brush in harmony with the biological ecosystem.



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