TRANSACTIONS

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POWER SUPPLY PLANNING IN TRANSMISSION-CONSTRAINED MARKETS

The advent of "open access" to the nation's transmission grid in the 90's brought with it the promise of letting multiple suppliers compete for loads, which in turn would result in lower costs for all consumers. However, many load serving entities have quickly - and in some cases, painfully - learned that the competition in power supply has not materialized. The physical and regulatory constraints on the transmission system have had a chilling effect on the ability of loads to shop for competitive supply. Traditional power supply procurement procedures must change with the new transmission landscape to allow the RFP process to produce the greatest opportunity for load-serving entities to benefit from the current regulatory environment.

The traditional RFP process for power supply has been very effective for several years. Once the load-serving entity has identified the need for new supply resources, an RFP is issued to the market a few years prior to the required in-service date for the new generation. After all the bids have been evaluated and a short list is developed, negotiations begin in an attempt to get bidders to "sharpen their pencil" to produce an arrangement with the lowest cost, best terms and conditions for the load-serving entity. A final contract gets signed with the final bidder and the new resource begins serving load. It seems pretty simple - **SO WHAT IS THE PROBLEM?**

THE PROBLEM

Although the goals of the RFP process remain unchanged, some of the factors used to evaluate new resources are out of your control. All of us want the same thing from our RFP processes now that we did twenty years ago, to procure the most reliable, lowest cost power supply to meet our load obligations. The reliability portion of the RFP equation has two components:

- **Reliability of the generation resource** - Will the facility be running and able to meet my load when I need it?
- **Deliverability of the generation resource** - Will the power produced from the generator be able to actually get to my load?

If the deliverability issue cannot be satisfactorily solved then the cost portion of the equation is moot. Unfortunately, the evaluation of the deliverability issue is effectively out of the hands of the RFP manager, because it is the responsibility of the Transmission Provider to determine if available transmission capability exists.

A request for transmission service through the OASIS is required for any new

IN THIS ISSUE

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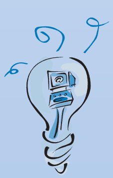

IDEAS WANTED!

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

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continued from Page 1...

generation resource, whether internal or external to the control area. Each Transmission Provider rules in their Open Access Transmission Tariff or "OATT" for how they study new requests for service. This is primarily a two part process requiring two different studies: the System Impact Study process and the Facilities Study process. Once a request for service has been made, the Transmission Provider checks to see if service can be granted without the need for a study. For requests greater than one-year in duration, it is likely that the impact of the request on the transmission system will need to be studied. The System Impact Study process determines if any facilities would need to be upgraded in order to grant the requested service. An estimate of the cost to upgrade the affected transmission system elements is usually included. The Transmission Customer has the option to request a Facilities Study once the System Impact Study has been completed, in order to get a detailed estimate of the costs and time required to complete the necessary upgrades.

The time required to walk through the entire study process can take up to eight months once all other requests ahead in the queue have been addressed. Depending on the number of requests that need to be studied prior to the submission of your transmission service request, it could easily take over a year to just get an answer to the deliverability question. Additionally, the construction of upgrades must be factored into the time line. Some station changes (relays, switches, etc.) can be done rather quickly, but many times new transformers or line rebuilds are needed, which can require twelve to eighteen months to complete. If new lines requiring new right-of-way (ROW) are needed, the construction time line and cost are nearly impossible to predict based upon ROW acquisition and regulatory proceeding schedules.

Failure to provide for sufficient time to evaluate the transmission delivery issue results in:

- **A reduced pool of possible suppliers**
- **A natural bias toward the incumbent provider**
- **Unnecessary risk due to construction and regulatory delays**

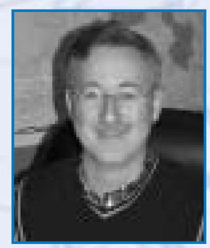
THE SOLUTION

Three things to consider when beginning an RFP process are:

1. **Start early** - The transmission evaluation process can take from six months to more than a year to determine what upgrades are needed, and the construction of facilities can take twelve to eighteen months. Based on these estimates, it is recommended that the transmission evaluation portion of the RFP begin three years prior to the needed in-service date.
2. **Require bidders to submit a transmission request on the OASIS as a condition for RFP participation** - If the transmission part of RFP process will take at least a year, requiring bidders to submit OASIS requests will produce a pool of bidders that are willing to be committed to funding the necessary studies and are also willing to fund the necessary upgrades. Also, this lets the bidders know that you are serious about opening up the RFP to true competition and are trying to give the market ample opportunity to address transmission issues.
3. **Use results of System Impact Studies as a part of the short list screening process** - This sets a natural deadline for short list development as all other factors can be controlled by the bidding party. As previously discussed, the ability to physically deliver the resource to load must become a primary factor in determining the pool of viable candidates to win the RFP.

The competitive power supply market can be fraught with potholes, but with some advance planning and a serious commitment on the part of both suppliers and load-serving entities to address transmission issues in a timely manner, some of the goals of open access can be achieved to the benefit of all.

To comment on this article or for more information, contact John Chiles - GDS - Marietta, GA at 770-425-8100 ext.125 or john.chiles@gdsassociates.com



WATER CONSERVATION BEST MANAGEMENT PRACTICES

Over the years, water conservation efforts have been motivated by diverse goals including addressing short-term and long-term water shortages, preventing land subsidence, providing environmental protection, and avoiding or postponing the high costs of new water system improvements, etc. Through implementation of various water conservation programs, experience has been gained in the effective delivery of programs, and also approaches which are not as effective. Practitioners have shared these experiences and adopted the approach of the Best Management Practice (BMP). A BMP is structured for delivering a conservation measure or series of measures that is useful, proven, cost-effective, and generally accepted among conservation experts.

In Texas, GDS Associates was part of the consultant team that provided technical assistance to the State of Texas' 2004 Water Conservation Task Force, a select group of representatives and experts from a cross section of municipal, industrial, and agricultural water using interests. The legislature charged the Task Force with reviewing, evaluating, and recommending optimum levels of water use efficiency and conservation for the state. Water conservation areas addressed by the Task Force and for which recommendations were submitted to the 2005 legislature included:

- **Identification of water conservation best management practices**
- **Regional implementation of water conservation strategies**
- **Statewide public awareness programs**
- **Funding incentive programs**
- **Targets and goals for per capita water use**
- **Evaluation of state oversight of water conservation**

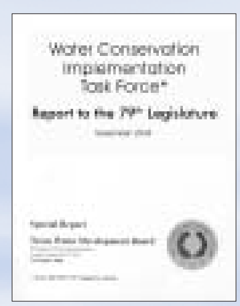
In fulfillment of the task for BMPs, the consultant team, under the guidance of task force subgroups, prepared the comprehensive **Water Conservation Best Management Practices Guide**, which was released in the fall of 2004. The guide contains 21 municipal, 14 industrial, and 20 agricultural BMPs. The BMPs are structured approaches based on proven management, educational, and physical practices that a water user can implement to achieve efficient and economical conservation of water. These BMPs should be considered by "any water user" in any geographical area. The drivers are cost and availability of water.

For **industrial** water users, the BMPs include guidance for improving the water efficiency of equipment and processes such as cooling towers, implementation of structured facility water audits, and employee education programs. In following the BMPs, the industrial water user should weigh the capital costs and changes in operating costs against the direct costs of saved water in a cost effectiveness analysis. For example, it is estimated that an industrial site landscape survey and implementation of resulting water efficiency programs could save up to 15% of water used.

The **municipal** BMPs were designed for utilities to both improve water use efficiency of their own operations and for programs to improve the efficiency of their customers. Some of the BMP topics for municipal water users are water conservation pricing, residential toilet replacement programs, school education programs, public information programs, water reuse, and rainwater harvesting. The basic decision to implement a municipal water conservation program should center on a cost effectiveness analysis that compares the costs of implementing the program to the costs of "conserved water" or the "avoided costs" of acquiring new sources.

The BMPs for **agricultural** water users are combinations of site-specific management, educational, and physical practices that have proven to be effective and are economical for conserving water. The agricultural BMPs in the guide are organized along the subtopics of irrigation management, land management, on-farm delivery systems, district delivery systems, and miscellaneous systems such as nursery production. The use of water conservation BMPs in agriculture can provide not only benefits to the immediate user, but also can provide benefits to the environment and wildlife as well.

The **Water Conservation Best Management Practices Guide** and the **Report to the 79th Legislature** can be downloaded for free from the Texas Water Development Board web site link below. Instructions on how to obtain bound hard copies can also be found at this link.



http://www.twdb.state.tx.us/publications/pub.asp

For more information on water conservation practices, contact George Freitag - GDS - Austin, TX at 512-494-0369 ext.141 or george.freitag@gdsassociates.com

GDS Associates, Inc.

Corporate Headquarters:
1850 Parkway Place
Suite 800
Marietta, GA 30067
770-425-8100
Fax: 770-426-0303
www.gdsassociates.com

Texas:
919 Congress Avenue
Suite 800
Austin, TX 78701
512-494-0369
Fax: 512-494-0205

New Hampshire:
1181 Elm Street
Suite 205
Manchester, NH 03101
603-656-0336
Fax: 603-656-0301

Wisconsin:
437 S. Yellowstone Drive
Suite 212
Madison, WI 53719
608-273-0182
Fax: 608-273-0312

Hi-Line Engineering, LLC and GreenLine Environmental

Georgia:
1850 Parkway Place
Suite 800
Marietta, GA 30067
770-426-0819
Fax: 770-426-0303
www.hi-line-engineering.com

Alabama:
1826 Opelika Road
Auburn, AL 36830
334-887-3297
Fax: 334-887-3298
www.green-line-environmental.com

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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:

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2. Financial Analysis and Rate Services
3. Generation Services
4. Regulatory and Restructuring Services
5. Transmission Services
6. Renewable Energy Resources, Dist. Generation, & CHP
7. Energy Efficiency and Demand-Side Mgmt. Services
8. Risk Management Services
9. Electric Planning and Design Services (Hi-Line Engineering, LLC)
10. Environmental Management Services (GreenLine Environmental)
11. Deregulation and Retail Energy Procurement Services
12. Utility Privatization Services
13. Water and Wastewater Utility Consulting Services
14. Natural Gas Consulting Services
15. Statistics and Market Research Services
16. 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
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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

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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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1850 Parkway Place
Suite 800
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