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GUERNSEY Energy

# FOCUS

for the energy industries



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## The Need for Production Cost Modeling

In years past, those conducting resource evaluations have had limited choices when it came to selecting an analysis tool. The primary method for evaluation was a simple spreadsheet. Enter today's market.

Fuel constraints, transmission congestion, complex market rules, environmental challenges and financing considerations add new levels of complexity. No longer will a simple spreadsheet suffice.

Production cost modeling is a tool that can be used to address these issues and if properly developed, it is an excellent tool for improving a utility's operational

Challenges faced in developing these resource models are generally two-fold – access to production cost modeling software and the availability of the necessary input data. The first challenge is dependent upon the perceived benefits and an acceptable level of spending. Cost can be lessened by licensing a product on a per use basis rather than on an annual

*“For utilities, a model of a utility's system, or region, has Swiss-army knife flexibility.”*

basis, utilizing a third party who has a license to develop and maintain the model.

The second challenge, inputting quality data, may be more

difficult to overcome. Without quality data, the study results can be questionable and the cliché 'garbage in equals garbage out' holds true.

Accurate data, such as the utility's historic load and load forecast, form the basis of the study. If using the model for a day-ahead dispatch, it will determine the resource schedule and commitment.

Another input is the resource operations and cost data. This data is important; however, it can be generic and based on the resource type and manufacturer's publicly available information (e.g., all General Electric 7FAs will have similar operating and cost characteristics).

For utilities, a model of a utility's system, or region, has Swiss-army knife flexibility. A properly calibrated model enables a utility to analyze any of the aforementioned issues and determine the most efficient use of its generation resources – short-term or long-term.

“Having the ability to model our system and potential new resources has been a great benefit for our resource planning process,” says Mike Troell, Manager of Wholesale Marketing at South Texas Electric Cooperative, Inc., Nursery, Texas.

plan increases. The best bet is to utilize a facilitator who is better described as a trusted advisor and a member of the team for longer than just a weekend session.

Second, decide what level of planning your cooperative needs to undertake. This can be segmented into two categories – a highly focused discussion of a critical issue, referred to as “micro-planning,” or a complete, all-inclusive strategic planning approach. The path chosen will impact the structure of the planning event and the tools utilized to formulate a measurable action plan.

In many cases, a day spent with the cooperative's key staff and board of directors is adequate, i.e. micro planning can result in a highly-effective and executable plan for addressing new challenges. In this case, a specialized facilitator or the cooperative's trusted advisor is best suited. Issues which may already be included in a previous strategic plan may need updating such as the cooperative's competitive position, power

**See Strategy on page 2.**

## Strategy in a Dynamic Marketplace

When management strategists first introduced corporate America to strategic planning some thirty years ago, businesses around the globe began looking inwardly to evaluate their competitive strategy.

An army of consultants touting their strategic planning prowess soon emerged. White-shirt consultants proclaimed their ability to shape culture, improve productivity, realign corporations, and create competitive advantages – all over the course of a board retreat.

There is little doubt to the value of effective strategic planning. The results can be transforming with an effectively implemented strategic plan. However, a flawed analysis, or worse yet a plan left on a shelf, can be disastrous, resulting in poorly planned ventures, inaction in the face of industry changes or employee apathy. Managers

have options if they want to avoid an ineffective plan.

First, choose wisely when enlisting the help of a facilitator. This goes without saying, but is worth revisiting. Ensure the chosen facilitator understands the utility industry. Moreover, ensure they understand the environment in which the utility operates. A facilitator who is unfamiliar with

the industry structure may be able to lead a planning session, but without the appropriate insight into the looming industry landscape, the probability of an ineffective



## InFOCUS

### Production Cost Modeling

*Future utility industry challenges are requiring the consideration of advanced forecasting techniques.*

### Strategy in a Dynamic Marketplace

*Effectively implemented strategic planning is required, especially when the utility industry is in a dynamic state.*


### Lawsuit Threatens Future Cooperative Facilities

*The suit against RUS' approval of coal-fired generation facilities could threaten future generation projects.*

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Once a system model is established, calibrating it against real-time dispatch decisions is critical. A properly calibrated model will replicate actual system performance within an acceptable tolerance level. If not, the reasons for the differences should be known and understood. In some cases, the way a utility meets its ancillary services requirements may cause differences with the model's results. If the modeling software does not allow for the provision of ancillary services, then one may want to add a 'dummy' load requirement to capture the resource operations. In other cases, a utility may find the model has identified areas in which the utility can improve operational performance. 

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## Strategy

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supply contracts, capital credit allocations or load management programs. What is important to know is that the cooperative's existing strategic plan may still be relevant but a particular issue facing the cooperative may require special consideration.

However, there are times when trends or regulatory developments require a more in-depth review of the cooperative's competitive strategy. For a complete, all-inclusive strategic plan, consider this an opportunity to bring all of the stakeholders of the utility together for an all-encompassing analysis of the cooperative, industry, goals and action plan. This type of plan requires careful guidance, both in the process, and the preparation of the plan. Where most plans fail, an all-inclusive approach to strategic planning will work and a few minor enhancements to the process can result in the changes your cooperative is seeking.

Strategic planning is a comprehensive and highly organized approach used to:

- Analyze internal and external issues
- Develop vision and mission statements
- Establish core values and beliefs
- List strategic allies and business partners
- Evaluate strengths, weaknesses, opportunities and threats ("SWOT" analysis)
- Develop strategic goals and objectives
- Prepare an action and implementation plan
- Create key performance indicators
- Establish reporting mechanisms and accountability measures
- Develop follow-up and revision plans

When done properly, strategic planning can also be an effective way for a cooperative to build consensus among its stakeholders, solve internal problems, address critical business issues and bolster teamwork. Six key factors that distinguish an effective plan from an ineffective plan are:

1. *Involve all stakeholders.* Involving members, employees, management and board members distinguishes a truly effective process. The inclusive process leads to "buy in" from employees - which leads to a greater chance for success.

2. *The plan should be short and usually no longer than one or two pages.* A binder full of facts, statistics, trends, reports and analyses will gather dust. If the entire plan cannot be written on the front and back of one sheet of paper, it is too long and will not be read.

3. *The strategic plan must contain a definitive action plan for what must be accomplished over the next 12 months.* This was among the greatest failures of the traditional planning process. The plan usually stopped after the development of the strategic goals. Therefore, no one knew how or who was supposed to achieve the plan's lofty goals. The action plan should be developed using the SMART method of establishing objectives - S=specific, M=measurable, A=attainable, R=relevant and T=time-oriented.


4. *A process to regularly report progress.* Performance reporting should be

comprehensive, yet concise and easy to read. Monthly activity reports and corporate scorecards are good ways to report performance.

5. *Consider linking compensation, bonuses or incentives to performance measures.* A well-known fact is if you want someone to pay attention to performance - link their pay to it.

6. *The plan must become a "living document," evolving as situations change.* In effect, the strategic planning process is integrated into the corporate culture because effective strategic planning is as much, if not more, about the ongoing process as it is the final product.

The cooperative's strategic plan - its goals, objectives, action plans, reports and progress tracking must be a constant, ongoing focus of the cooperative. The plan must be included as topics for all meetings of employees, boards and members.

The electric industry is evolving. Managers are faced with extraordinary changes on a regular basis. To put it in the perspective of the great philosopher and management guru Yogi Berra, "The future ain't what it used to be." Meeting these new challenges is difficult even for a seasoned manager. But, there are ways to prepare to meet these changes. One way is by developing a well thought out plan - a strategic plan. Whether you need a quick solution like the micro plan provides or a more comprehensive solution, a good strategic planning session will help managers meet tomorrow's challenges. 

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*"The results can be transforming with an effectively implemented strategic plan."*

## Lawsuit Threatens Future Cooperative Facilities

In July 2007, three environmental groups collectively filed suit against the RUS seeking to block financing for Southern Montana Electric Generation and Transmission Cooperative's proposed 250 MW Highwood coal plant in Montana.

Among numerous complaints for alleged violations of the National Environmental Policy Act and the National Historic Preservation Act, the complaint states that "RUS neglected to consider the cumulative impact of greenhouse gas emissions from the Highwood coal plant in

combination with emissions from other coal plants, including seven other coal plants that are currently seeking RUS financing."

(emphasis added) Clearly, should this claim prove successful, an ever-increasing hurdle will be faced by G&Ts seeking to construct coal-fired generation using RUS funding, as the ability to negate the cumulative impact of every additional unit proposed will grow increasingly difficult with time.

Closer study of the Plaintiffs' suit reveals an intent that is even more disturbing: an attack upon RUS' authority to fund any power plant construction whatsoever. To subtly support their contention, the Plaintiffs cite language in President Bush's proposed Budget for 2008, which states that RUS funding should focus on the construction of transmission and distribution assets, while the development of power

plants "should be financed through the commercial market." Though the Plaintiffs' aim in putting forth this "announced policy" is clearly targeted at the construction of coal plants, the implication is that RUS loans should never be allocated to construct generation resources, coal

or otherwise. Paradoxically, this language would similarly preclude RUS loans for the construction of renewable generation. Perhaps the most


disheartening factor garnered from the Plaintiffs' suit is the general flavor of disdain expressed for the RUS loan program and the cooperative community in general. Specifically, Plaintiffs assert that:

*RUS' Electric Program, one of many USDA "Rural Development" programs, is an artifact of President Roosevelt's depression-era campaign to assist impoverished farming communities by "electrifying" the West. While rural communities now generally have access to affordable electricity, RUS still has considerable funds at its disposal to spend in areas that, in many cases, are no longer rural.*

While true that many cooperatives have experienced

significant growth as a result of urban sprawl, such statements ignore the fundamental continuing purpose of the cooperative structure—to allow owners/members to obtain reliable, inexpensive electric power via a sound generation, transmission and distribution infrastructure in the communities they serve.

The future importance of energy efficiency, conservation and renewable resources is incontrovertible. However, the desire expressed by some groups to eliminate new carbon-based generation serves no purpose but to thwart the discussion of a balanced resource strategy designed to minimize environmental impacts while meeting an ever-growing demand for electricity.

The "BANANA" (Build Absolutely Nothing Anywhere Near Anything) principle espoused by a small but very vocal and active group certainly must be addressed by the cooperative community. Indeed, cooperatives, whose rich heritage of confronting misconstrued beliefs regarding their mission, will provide a balanced perspective supporting the resourcing requirements for serving future energy needs. Cooperatives are inherently responsive to the public interest; after all, members control the cooperative, and also comprise the general public. U.S. oversight of generation resource planning, which results from RUS' loan program for power supply borrowers, further ensures that the resource plans of cooperative borrowers are consistent with sound public policy. 

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