Buying Power— What It May Cost You To Save Money

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ABSTRACT

The foundation of a competitive energy market is transparent competition wherein marketer bids and contract terms are visible to the end user so that a true apples-to-apples comparison may be made. To secure such comparable pricing, end users may seek informal price quotes, pursue a request for proposals (RFP), or use open or blind bidding procedures (e.g., an auction).

Many end users in deregulated power markets assume that such procedures will automatically result in cost savings. While often true, costs may be incurred in the procurement process, and contracts may include additional charges beyond the stated price. Some of those costs may rival or consume much of the savings from competitive procurement.

Minimizing those costs is an essential part of maximizing real savings in deregulated markets. Doing so may involve use of an energy procurement consultant, employing online auction software, combining demand response and procurement contracts, and other techniques.

Understanding these efforts, and what they may cost, is the first step to saving money through the procurement process. Based on direct experience handling or overseeing many power purchase agreements, ranges of such costs are provided along with ways to trim or eliminate them.

GET THE "BEST" PRICE?

Where retail energy customers are able to secure power from non-utility marketers, various techniques are used to "get the best

price." Some will simply respond to a phone call, mailed brochure, or trade show pitch, taking the marketer's word that he will "save you X percent." Others will query peers for their experience, or perhaps ask several marketers for informal pricing (i.e., based only on monthly consumption figures and standard utility load profiles). In all cases, a few prior steps should be taken to avoid getting "burned." Doing so could save many times the incremental cost of such efforts.

REVIEW ACCOUNT DATA

Before handing your account numbers and passwords over to a marketer, do some homework. Assemble and verify account numbers, service addresses, etc., and review at least one year of usage, peak demand, and cost data.

Perform a few simple benchmarks. Determine the average annual $/kWh and average annual kWh per square foot. If building types and locations are similar, see if the numbers are roughly equivalent, or if any facility's cost and/or usage are much higher than that of others. To compare to many other buildings, or if only one account exists, or if your facilities are geographically spread out, check your information against publicly available databases such as the DOE's Commercial Building Energy Consumption Survey (CBECS) at:

www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/detailed_tables_2003.html#consumexpen03.

For city-specific data for commercial buildings, consult the BOMA Experience Exchange Report ($390 for non-BOMA members) which may be purchased at:

http://shop.boma.org/showMultipleItems.aspx?session=A592DFE803364CC2A1CA0A7DF16F5733&category=126.

If any results appear significantly out of line, correct the problems (e.g., very high usage, very high unit cost) before committing to a power contract. All of the following types of problems were revealed by such simple analyses:

- Tenants stealing common area power.
- Landlords charging tenants for common area power.
- Wrong (or not best) tariff, for commodity and/or delivery.
- Metering/billing errors.
- Failed energy management systems.
- Equipment running when not needed.

Many contracts limit customers to usage within defined (e.g., ±10 percent) ranges based on usage seen in the same month in the prior year. Consumption outside that range could be charged at a much higher spot market price. If a power contract had been signed that committed the customer to continue using power as seen in prior years, correcting these problems during a contract's term (instead of before) could result in charges for under (or over) usage.

The same type of problem could occur from changes to a facility, such as addition of a wing or new building, or energy upgrade (e.g., more efficient lighting or chiller). Any such projected changes to usage or demand should be part of the account review so that *projected* kWh and/or kW are the bases of pricing, rather than historical data.

MAYBE HIRE A CONSULTANT?

When hiring an energy procurement consultant, look for *experience*. As utilities downsized due to deregulation, many former utility people tried to enter the competitive world as consultants, claiming that their background with a regulated utility automatically qualified them to consult on competitive procurement. In truth, the opposite was often the result. For some, working many years with a regulatory mindset was an impediment to thinking competitively.

When evaluating consultants, don't be fooled by such claims, or by a firm's size, or the academic credentials of its principals. Actual procurement experience on behalf of end users is essential. While holding an AEE Certified Energy Procurement Professional (CEP) also won't ensure good results, *not* having such certification should, however, raise eyebrows.

Be sure to also evaluate the scope of services provided. While not

intended to be exhaustive, all of the following should be included when seeking the lowest overall power pricing:

- Help assemble account data.
- Check suitability of existing delivery tariff(s).
- Benchmark annual usage/demand.
- For large accounts, examine hourly load profile(s).
- Review consistency of account usage.
- Assist with credit issues or financial standing.
- Forecast utility and bidder pricing.
- Watch market for pricing opportunities.
- Critique bidder contracts prior to pricing.
- Handle the entire bid process.
- Explain pricing structures and risks.
- Model total costs of proposals.
- Ensure simple signing procedure.
- Aid securing of non-price benefits.

DEVELOP BID DOCUMENTS

A request for proposals (RFP) need not be a lengthy document, nor must the RFP process be protracted. The basic document should, however, contain (along with other items) a clear description of what accounts are to be covered by proposals, the types of power products to be priced (e.g., fixed, indexed, etc.), the length of desired term, delivery point for the energy, desired payment terms (e.g., within 30 days), and a precise description of what is to be included (or excluded) from the quoted pricing, including taxes. Failure to do so may result in non-comparable pricing, hidden charges or fees, or other costly problems down the road. Sample contracts should be requested with (and preferably in advance of) pricing so the customer (or his consultant) may review them to avoid any "surprises."

These steps typically require involvement of facility and purchasing personnel, an in-house attorney, and others. Experience with cus-

tomers each having several dozen (or more) accounts found that this work may easily consume a person-month of time, split roughly equally between administrative and technical pay grades. The internal cost for such efforts may then fall between $5K and $10K.

Experienced consultants may charge a roughly comparable fee (or less) for these steps, but costly mistakes are likely to be avoided, and valuable company personnel time will instead be used for the core business.

PAY A CONSULTANT AND/OR AUCTIONEER

For such reasons, some customers prefer to have an experienced consultant or energy auctioneer handle the procurement process. While often a good choice, customers may also competitively procure such services to secure the lowest cost. Many providing such services charge between .5 and 2.0 mills per kWh, though some charge significantly higher (and a few are lower). A mill is 1/1000 of a dollar (or 1/10 of a cent) so, for example, the charge for handling a one-year contract for a customer with a single electric account using 10 million kWh/yr (about a 3 MW peak demand) could range from $5,000 to $20,000. The charge for a two-year deal (involving 20 million kWh) could then be $10,000 to $40,000, despite the fact that the amount of work involved for the consultant is unlikely to be significantly more than for the one-year deal. Keep that in mind next time you are urged to sign a multi-year contract.

Higher mill/kWh rates may result if any of the following conditions pertain:

- Average account size is small (e.g., less than 1 MW).
- Many accounts are involved.
- Accounts are distributed across multiple markets (e.g., zones, states, regions).
- Special contractual conditions or pricing are involved.
- Customer credit issues exist.

- Additional services are required (e.g., hedging, presentations).

Many procurement consultants have developed formulae for their pricing that have built-in minimum charges per account, per market, etc., plus a mill/kWh factor for the expected kWh volume, with additional charges for issues such as those listed above.

Such fees typically cover setting up and holding an event lasting about an hour, during which pre-screened marketers bid against each other for all or parts of a customer's load, through either blind emailed bids or an online auction. The lowest bidder at a defined time (or after a defined number of bids) is the winner. The customer then signs a contract with the winning bidder. Depending on the contract between the consultant and the client, the procurement fee may be charged as an adder to the electricity price and paid by the winning bidder to the consultant, or paid directly to the consultant by the customer.

While some claim that online auctions always yield the lowest possible price, head-to-head tests against blind auctions found little or no difference in price, once all fees to consultants and auctioneers were taken into account. Depending on the complexity of the customer, the desired pricing structure(s), and other factors, online auctions may also involve process truncations (e.g., forced aggregation of accounts) not essential in blind bidding. As a result, some flexibility in price negotiation may be lost.

In some cases, it may instead make sense to merely pursue informal bids because account size and distribution may limit savings from competitive procurement. In such cases, investing in more sophisticated procurement techniques may cost more than it will save. While markets and customers vary greatly, here's a useful rule-of-thumb to consider: if the total cost for power (commodity plus delivery) for an account is less than $20,000 a year, the cost of competitive bidding procedures for such accounts may not be justified because the incremental savings that result (relative to securing informal price quotes) may not be worth the cost.

RUN YOUR OWN AUCTION

If, however, a customer feels that a live open auction process is essential, he may instead buy or use his own online auction software (e.g.,

Ion Wave Technologies [www.ionwave.net], or Ariba [www.ariba.com]). He may then run the show himself and avoid having the auctioneer's fee built into his power price. Such software is not cheap: costs may exceed $30,000. Depending on the customer's power consumption, contract term length, and in-house personnel costs, however, buying and using such software could (relative to using an auctioneer) have a payback period under one year. Some general online auction services (i.e., which don't specialize in energy procurement) may also be cheaper, with auction pricing under $15,000 per event. Note, however, that such services require a higher level of power procurement knowledge by the customer.

It should be noted that, because there are many steps prior to setting up an auction (e.g., assembly of bid data, contract review, etc.), a customer's first-time in-house auction should be supported by an independent consultant or experienced in-house energy buyer to ensure success and satisfaction. There may also be value in having the software provider oversee the customer's first auction to assist training of customer purchasing personnel and to avoid problems.

DON'T GET SNOOKERED BY EXPECTED SAVINGS

When confronted by a consultant's or auctioneer's claims of savings, be aware that such numbers may be relative to an "expected price" developed by the consultant. Experience with such numbers found that they tend to be somewhat inflated by assumptions that make the final winning price look good. To promote his own services, it is in the interest of an auctioneer to maximize the apparent "savings" from his process, especially if his fee is high.

A customer using an auctioneer should instead develop his own "expected price" (or have an independent consultant help him do so), preferably based on recent bids for comparable customers. In one case, for example, the methodology used by an auctioneer to develop its "expected" pricing was insensitive to a given customer's hourly load profile or load factor, making such numbers questionable.

One useful pricing source is the "Weekly Retail Power Price Indications" section of the *Hess Weekly Electricity Update*. While presently limited to 13 zones in the PJM, NY, and New England ISOs, this bulletin provides one-year forward price quotes for each zone for a typical

commercial customer with a 60 percent load factor. It may be obtained for free through a request to a local Hess rep.

AND DON'T BUY MORE THAN YOU NEED

Customers need to watch for very high consulting fees covering services such as regulatory "representation," customer "education," presentations to corporate boards or the CFO, market analyses, etc. Such options are often just fluff that will not yield any measurable savings, though first-time power customers may find some value from such hand-holding. Some consultants pitch their processes by including basic financial services (e.g., Sarbanes-Oxley documentation), but a qualified purchasing department should already have personnel and procedures in place to handle such issues.

In a few cases, customers with big names (and deep pockets) have paid large fees that, when averaged out per kWh, approached 5 mills/kWh (i.e., .5 cents per kWh), which was roughly the level of savings that could be expected from competitively bidding their accounts. At no point should a consultant or auctioneer's total fees exceed 25 percent of expected savings (instead some consume more than 50 percent).

BUYING WITHOUT BENCHMARKING

Buying directly from a marketer, without benchmarking his pricing, may also result in economic pain. In one case, a customer signed up with a retail power marketer exhibiting at a buildings trade show. The marketer promised savings, but the contract did not contain any way to either quantify it or reimburse the customer if he could prove savings did not occur. The customer lacked the resources to verify that the month-to-month pricing he received was any less than the utility's pricing (which varied based on fuel adjustment charges), or that of competitors' pricing.

When eventually analyzed by an independent consultant, the pricing turned out to be 10-15 percent higher than both the utility and that of several other marketers, if the contract had instead been signed with any of them on the same day. The customer also did not see that the contract contained an automatic renewal clause that (unless the

customer gave 60 days notice prior to the contract's termination date) renewed the contract for *another year*—at whatever month-to-month pricing the marketer chose to charge.

REVIEW CONTRACTS

While retail power contracts in mature markets are generally short (i.e., less than 4 pages) and are relatively standard affairs, some marketers (especially in new markets) persist in pushing tomes that may run 8 to 10 pages in length. Some are merely adaptations of wholesale power contracts that may also involve financial instruments (e.g., hedging) and complex pricing methods rarely acceptable to typical retail customers. Enron, for example, was notorious for pushing a ~20-page contract that intimidated many customers with its terminology, restrictions, confusing options, and potential penalties. The same contractual nonsense was apparent in the first year of the ill-fated Ontario power market: some marketers were acting more like kidnappers than service providers.

Marketers are happy to provide contracts for your review, whether or not you also request pricing. If considering purchasing from a marketer, review a sample of his contract and feel free to ask questions regarding terminology, terms, etc. For comparison purposes (or just an "inoculation" to contract language), a generic retail power contract ("Base Contract for Retail Sale and Purchase of Natural Gas or Electricity") is available from the North American Energy Standards Board (http://www.picosearch.com/cgi-bin/ts.pl) for $50 (free to NAESB members). Its 14 pages include blank forms, optional provisions, and clear contractual language.

UNDERSTAND POSSIBLE SAVINGS

The only way to ensure savings relative to default utility pricing is through a contract that is indexed to monthly utility pricing, e.g., a guaranteed $/kWh or percent below the utility price. Otherwise, there's no way to accurately determine net savings until the end of the contract term when all monthly pricing information is in hand. If a fuel or energy adjustment charge is part of a utility price, even trying to compare a fixed marketer price to a known tariff rate will not yield useful results.

Many claims of possible savings are therefore just hype.

The same may be said for marketers offering savings verification services. If a customer asks a marketer to calculate the savings from his contract, the benchmarking methodology and calculations must be transparent and fully understood for such a determination to be credible. Otherwise, the potential to toot one's own horn is quite obvious. The cost of such a service must also be seen as a separate line item (in the contract or on the bill) to be sure its impact on total cost is known, and not a variable.

MIXING IN DEMAND RESPONSE

Where the margin between supply and demand often becomes tight (e.g., regions with constrained transmission, rapid growth, and/or little or no new generating plants), demand response (DR) programs may pay customers (when called upon to do so) to cut back electric demand and/or turn on their backup generators. In exchange for such actions, they may be paid for each kWh they save or generate, and (depending on the program) simply for making backup generators available, whether or not they run.

To help customers take advantage of DR programs and manage their demand, "curtailment service providers" (CSP) have appeared (note: names for such types of firms vary among regions). In some cases, they are divisions of existing power suppliers already having contracts with customers. In many other cases, they are firms that specialize in this service via real time access to customer electric meters, remote control of loads (e.g., air conditioning), and procedures for quickly dispatching customer-owned backup generators.

Several dozen CSPs are licensed or certified (as of 2007, mostly in coastal states) by the managers of power grids (e.g., independent system operators). They offer their services to customers under contracts that take some of the benefit paid by those grid managers to customers that successfully shed load. Most CSPs take between 25 percent and 50 percent (some take more) of the benefit to manage a customer's demand response, even though (in most cases) a customer could simply enroll himself in the program and receive the entire benefit for successful load shedding.

Doing so, however, may entail additional equipment, and knowl-

edge of programs, as well as the attention of otherwise busy facilities personnel. Some programs have built-in penalties for failure to shed load when called upon to do so. A customer may then take some risk if he manages his own demand response. To avoid problems, a customer may allow inclusion of DR services in his power contract or simply sign a contract pitched to them by a persuasive CSP. Most customers see DR benefits as "free money" and are happy to share it with someone who will handle all the costs and risks involved.

Because DR services are only a few years old, programs are constantly changing and CSPs in general are not well known. As a result, very few customers have tried to competitively bid out such services. Few are even aware of how to secure a list of CSPs from whom they could seek bids (most are listed at ISO web sites), how to qualify such firms, and what level of competition exists among them. The end result is customers often give away an unnecessarily large portion of their DR benefits.

Once again, use of a consultant familiar with the programs, players, and contractual options could save far more than the consulting fee involved.

ABOUT THE AUTHOR

Lindsay Audin is the president of Energywiz, Inc., an energy consulting firm serving commercial/industrial facilities, government agencies, energy suppliers, and other consultants, both in the U.S. and abroad.

Audin has been named Energy Manager of the Year by three different national or regional US organizations. In 1993, the Association of Energy Engineers named him their International Energy Manager of the Year, and in 1996 inducted him into its Energy Manager's Hall of Fame. He holds certifications in energy management and energy procurement. In 1992, he founded the NY Energy Buyers Forum, a group of large energy users active in regulatory matters. In 1999, he developed new techniques for developing and analyzing interval metering data that are now used by hundreds of practitioners. He authored NYSERDA's "Primer on Smart Metering," and teaches his techniques in both live and online seminars. Based on his extensive experience in energy procurement, Audin also teaches AEE's online course in power purchasing (for details, go to www.aeecenter.org/realtime/PowerPurchasing/).

His 31 years of experience in the energy services industry include 8 years as energy manager for Columbia University and 12 years with private engineering and energy consulting firms in New York City prior to founding Energywiz in 1996. Audin has won many national and regional awards, and has been featured in videos, case studies, and magazine articles. Audin maintains a column on energy issues in *Engineered Systems* magazine, and is a contributing editor to *Building Operating Management* magazine.