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Basics for Contracting Competitive Energy Purchases

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The EUN/APEM Energy Management Training Series is designed to provide nonspecialists with an introduction to the fundamentals of energy management.

Contracting for competitive energy can significantly lower energy costs and minimize price risk when compared with accepting the local utility's business-as-usual delivery of energy supplies. Any facility that spends a half million dollars or more on energy can realize sufficient savings to easily justify investing time to this effort. End user concerns of supplier reliability, financial stability, development of a purchase strategy, contracting methods, supply backup options, and supply fluctuations are similar in both gas and electric markets. If your firm has not taken advantage of this opportunity to reduce utility costs, then it is time to implement a purchasing strategy.

Preparation Is Required

Preparation is the key to successful energy purchases. Begin by organizing the information that describes your current rate structures, current utility costs, and plans for future changes. Talk with energy managers at similar facilities who already purchase commodity energy and determine the prices they are paying. Trade groups, such as the Building Owners and Managers Association (BOMA) International and government agencies, such as the U.S. Department of Energy, publish usage data that can be used for bench marking. Included are typical energy costs per square foot by building type and region. This data can be compared with offers made by marketers and to set targets for achievable savings for your facility.

Once current costs and future plans are determined, motivate the finance and operating personnel at your facility to develop a purchasing strategy. Establish personal and business relationships within your company with those involved in purchasing decisions. Your goal is a signed contract that protects the interests of your company.

Successful energy purchasing requires an in-depth knowledge of your operation's needs and the qualifications of potential suppliers. Awareness of these needs and qualifications is important, even if you are planning to use a consultant to manage this task. If an energy consulting firm is engaged, you can then direct its work and verify the company's performance.

Know Your Needs

Develop energy consumption data at each location by account. Without such data, negotiations are nearly impossible, and a lack of information places the end user at a disadvantage during negotiations. This information includes the name of the utility, service classification or tariff, and consumption and cost by month for the last three years. This information can be obtained from past energy bills or from the local utility. It is important to understand how you are being charged. Understand what the components of the bill are, including demand, transportation or transmission, energy, and fuel charges. For electricity, know the time interval that is used to calculate the peak demand, the times and days considered by the utility to be

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on-peak and off-peak, and annual ratchets.

For natural gas, be sure to calculate the consumption of alternate fuels, such as oil or propane, any line losses charged by your utility, and how weather affects usage. Line loss information can be obtained from the Public Utility Commission (PUC) since the transporter must file this information. Weather data is available from several sources, including the National Weather Service. A regression analysis can then be performed to determine how consumption is related to temperature. This data will demonstrate your purchase requirements and will be used by the supplier to nominate and schedule your energy supply.

For electricity, the next step is to develop a load profile. Load profiles show how electrical energy is used over time. This data is sometimes available from the electric utility, which obtained the information from the recording demand meter used to determine the peak demand billing component of your electric bill. Another source may be your building or energy management system. Plotting a load profile shows when peaks occur and how sharp they are, both of which can influence your electric bill. Marketers use this information to develop prices. They also may be able to help you save money by cutting those peaks.

The annual load profile of consumption in a monthly breakdown shows how a facility uses energy and may reveal cost savings opportunities. For instance, a large summer cooling load could be served by natural gas because gas is normally less expensive in the summer than in winter. The cost of electricity varies with the time of day, as well as the seasons, possibly making a gas-fired chiller less expensive to operate than an electric unit. Similarly, understanding the components of a base load and the causes of the peaks can help control the total cost of contracted energy. The hourly price of competitive power will, for example, be extremely sensitive to any spike in consumption above contracted demand. Further cost savings can be achieved by identifying peak shaving options and curtailing load. Managing your facility's load closely is important to meeting your company's savings goals.

### Know Your Potential Suppliers

Begin by obtaining a list of suppliers who are registered with your state PUC to act as vendors. Some may focus on the wholesale market, selling mainly to utilities, independent power producers, or municipalities, and may not be interested in serving your facility. Others will focus on retail customers, but their experience selling to end users may be limited, especially in regard to electricity since the market is so new.

Supplier experience is essential. Look for firms that have participated in electric retail pilot programs and those that have supplied natural gas on a retail basis for several years. Find out who its customers are, how long it has been supplying them, and if references are available. Also determine how familiar the supplier is with the local utilities, their tariffs, rates, and operating procedures.

Next, review the supplier's financial condition. Do they have access to the large amounts of capital that is necessary to supply energy to retail customers? What is the firm's revenue trend? How much debt does it carry? How is it rated by services such as Dun & Bradstreet?

On the supply end, have the vendor identify as many components of the purchase as possible. These should include, but not be limited to, its supply and capacity sources and reserves, interstate transportation and transmission, distribution, pricing mechanisms, and balancing and management fees. To achieve the greatest savings, most of these components should be open to negotiation.

### Developing Your Purchasing Strategy

Start by setting realistic goals. Pricing strategies can vary depending on an institution's operating flexibility and alternate fuel capability. Several questions have to be addressed: Is it important that your institution's annual energy purchases meet or beat a budget target, or is it more important that energy costs not vary a great deal? Can you index your purchase price against a published, but varying, market price, or is a fixed price more desirable? Will the price be for a one-year period, or divided by winter and summer periods? Establishing a pricing policy covering more



than a year is unwise, unless the contract can be re-opened later.

A purchasing strategy can include negotiated or tariff-based options with a local utility or distribution company. As the gas market matures, end-users are discovering that their utilities can provide fairly competitive pricing in certain months. Depending on the pricing transparency offered by a local utility, you may benefit from comparing utility prices with marketer gas for several months prior to developing a supply contract. At the same time, it is important to investigate price components to ensure that similar elements are comparable with one another. Be aware of changes in utility tariffs so you leave enough room to negotiate future deals and allow for pricing flexibility.

To identify long-term supply options, consider the following questions:

- Is this purchase local, regional or national?
- Do you want to aggregate all of your facilities, or will individual sites purchase their own requirements?
- What degree of reliability is required to keep your operations on track?
- Should you tie the purchase of natural gas and electricity together?
- Would a Btu contract with fuel exchanges fit your facility's needs?
- What, if any, value-added services could be useful to you?

To make the process run smoothly on your end, identify everyone who will be part of the decision making process and form a strategic purchasing team. Establish negotiating roles and relationships before opening contract talks. Have the team determine what purchasing strategies they will pursue within the group, and hire a good attorney, preferably one with energy experience, to carefully review any agreement you are considering.

Talk to colleagues within your industry about your general purchasing objectives. Knowledge of what others in your field have accomplished is important. For example, if you run a medium-sized university, and a comparable nearby facility saved 10 percent on its energy bill, find out how. Companies often discuss such achievements at trade associations or in energy publications.

Be prepared to educate your team. Reliability concerns need to be addressed, along with any other questions from your colleagues. If you are unsure how to answer them, ask several vendors to help clarify the issues. Any energy services provider unwilling to take the time to educate you does not deserve further consideration.

### Developing Your Own Supply Contract

Purchasing energy should be on your terms, not those of the suppliers. After reviewing a large number of energy supply contracts from many vendors, my firm has yet to see one that is advantageous to the end user. Some contracts can even place your firm at considerable risk. Gather as many sample contracts as you can to establish a contract library. Browse the internet and the libraries of professional and technical colleges, picking out favorable contract terms.

All contracts should cover the following:

- **Price:** Investigate several options with potential marketers before reaching a final decision. Price can be fixed at a predetermined level, determined by season, or set to a market index, BTUs, or any number of options.
- **Term:** A one-year contract with an option to renew for another year is recommended. Take the time to review all options before committing to a long-term supply for your facility's energy requirements.
- **Reliability:** Define "reliability" for your facility by answering the following questions: Do you need the same level of reliability you currently enjoy from your utility supplier? Is there any reason to doubt your new supplier can provide it? The ability to shed a portion of your load or supply it with an alternate fuel will determine how much flexibility and leverage you have. The more flexibility in the management of your operations, the greater price discounts can be.

A vertical banner advertisement. At the top, it says "Sustainable Facility" in green and blue text. Below that is a photograph of a modern building with a glass facade. Overlaid on the photo is the text "THE POWER TO CHANGE!" in large, bold, white letters. Below the photo, the text "CLICK HERE FOR FREE SUBSCRIPTION" is written in large, bold, white letters on a green background. At the bottom, it says "Your Environmental Source for Facility + Power Management" in white text on a green background.

A rectangular advertisement for a conference. It features the "ecobuild fall" logo with a green leaf icon, followed by the "AEC-ST fall" logo with a blue circular icon. Below the logos, it states "December 10-13, 2007" and "Washington Convention Center Washington, D.C." in white text on a dark blue background.

A rectangular advertisement for a guide. It has a black background with the text "Just Updated!" in white. Below that, "The LEED Guide" is written in white and blue, with "LEED" in a larger font. At the bottom, "2007" is written in white on a black background.

A rectangular advertisement for an online store. It features the text "AEC STORE" in a stylized font, followed by "has products that can't be found anywhere else!" in a mix of white and yellow text. There are small star icons at the bottom.

- **Responsibility for transport:** Managing transportation on interstate transmission systems and pipelines requires skilled personnel. Few end users have such experience, so your contract should specify that this task is solely the marketer's responsibility. In addition, the following terms should be delineated for natural gas: primary and secondary interstate pipelines, the type of transportation firm, and recallable or interruptible transport. If the transport is recallable, identify the recall terms. Similar requirements apply for electricity transmission.
- **Management fee:** Pricing should be negotiated so that it is similar to that of comparable customers. At a minimum, the marketer should share any savings achieved in transport costs equally with your company.
- **Balancing:** Most utilities and interstate pipelines require that your facility's usage matches your supplier's deliveries. If you over-consume or under-consume, you could be subject to balancing charges or penalties. Hold your marketer responsible for managing supply and for payment of any charges or penalties. However, if there is a substantial change in your operations that could alter consumption, it is your responsibility to communicate this to the marketer to avoid penalty charges. Ensure there is an acceptable process for dispute resolution within the contract.
- **Force majeure:** Most contracts have a "force majeure" clause to explain conditions under which a supplier claims it is unable to deliver energy. Review this clause carefully; it should be severely limited. Supply should not be affected because the marketer can get a better price elsewhere, nor should the freezing of one gas well limit receipt of your supply. Acts of God, in the legal sense, such as war or disaster are the most common types of force majeure clauses.
- **Taxes:** In some states, tax savings can be gained if you take title to your energy purchases out of state. However, this may vary with the tax-exempt status of your institution and state regulations. Investigate this issue carefully and structure the purchase according to taxing authorities.
- **Communication:** While the major points of your contract are under negotiation, start thinking ahead to the management of your energy supplies. Communication failures can be very costly in terms of missed savings or penalties incurred. Unless prices are fixed, determine how and when pricing information will be provided. Consider upgrading communications equipment to incorporate pagers, fax modems, and cellular phones for the responsible parties. Understand the details of the communications procedures, and raise these questions: who in your organization will have responsibility to keep communications open; will your marketer phone you, and follow up with a fax; what is contained in an offer; if your facility has alternate fuel capability or the ability to shed load, how does your marketer notify you when your supply is curtailed; will the notice be verbal or written; and how much time will you receive prior to interruption of your supply?
- **Regulations:** Your contract should have a general statement explaining that your supplier must meet all Federal Energy Regulatory Commission and PUC orders, interstate pipeline regulations, and local distribution company tariffs, and any applicable operational procedures.

### Looking Ahead

The day after your deal is concluded, start looking ahead. Stay aware of the changing energy landscape by attending seminars and trade shows, reading industry publications, and participating in trade associations. No one knows all the strategies in this business, so you will learn new and profitable ways to improve your purchasing techniques. For those willing to look, a better deal is always just around the corner.

Although deregulation of the electric utility industry will provide alternatives for electric supply in the future, these alternatives are not fully mature. And once you have experience with "marketer," "transportation," or "spot" natural gas purchases on the open market, the coming deregulated electric market will be less of a mystery.



Regardless, your purchasing program will benefit from forward-looking strategies that meet changes as they occur in facility use, facility size, or building function. The contracting and purchasing process will benefit by involving energy managers on all levels, as well as purchasing personnel. Having a consistent, timely flow of information between all these parties is both an important first step in the contracting process and the key to cost savings in the future.

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