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FEATURE

Energy Procurement— eBay Style

William Horton

In deregulated markets, online reverse auctions enable buyers and sellers of electricity, natural gas, green power, renewable energy certificates, and other energy products to match their needs in long-term contracts. By conducting reverse auctions via the Internet and online communications, transactions are streamlined into a systematic, comprehensive, and structured sourcing process. Online procurement tools also provide energy managers with detailed documentation of the procurement process, including valuable data to validate compliance with Sarbanes-Oxley requirements as well as with Generally Accepted Accounting Principles (GAAP). In fact, many energy managers say these benefits are at least as important as getting the lowest procurement price when electing to use reverse auctions.

Reverse auction procurement strategies are a good fit for companies with large load requirements—typically at least 2 gigawatt-hours per year—in multiple markets with complex pricing and frequent tariff changes. Using a reverse auction strategy creatively can meet energy managers' diverse goals, including immediate price transparency, cost savings, budget management for long-term procurement requirements, and renewable-energy procurement.

In a reverse auction, there is one buyer and many competing suppliers who, in contrast to a regular auction, bid prices down to offer the buyer the lowest price based on a customer-defined need. A third party normally facilitates a reverse energy auction by providing the software platform, conducting due diligence on suppliers, and offering consultative services on crafting the buyer's request for bids. The process is designed to not only reveal the lowest possible price, but also to maximize pricing transparency.

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Multiple Benefits

Obtaining competitive price bids requires clearly defining the buyer's requirements, whether price discovery and contract negotiation is conducted online or by a broker sending faxes and making phone calls. A buyer's requirements for peak and off-peak periods, with variations of load by facility and location, are inherently difficult to communicate. Online platforms can streamline this process. Although the work to initially define the buyer's needs may still be substantial, instantaneous online communication and clarification of bid requirements helps suppliers accurately formulate competitive bids and minimizes gray-area miscommunications when it comes time to smooth the final agreements (Table 1).¹

In contrast, traditional request-for-proposal procurement relies on fax and phone communication with suppliers, which is generally cumbersome and time-consuming. Kevin Myles, manager of the

Public Buildings Service for the greater southwest region of the U.S. General Services Administration (GSA) comments, "The open electronic format allows questions to be posed and answered quickly so that all suppliers have the same information—it levels the playing field."²

Reverse auctions can also help buyers comply with internal procurement procedures, GAAP, and Sarbanes-Oxley requirements. With an online platform you can capture an accurate and time-stamped account of the entire process. "The ease of record keeping for Sarbanes-Oxley requirements is a major factor in client's decisions to use this process," says Phil Adams, chief operating officer and president of World Energy Solutions, an online energy auction vendor.³

Collecting bid data provides transparency to the auction process, which in a traditional paper-driven process might otherwise be obscured. The ability to document the procurement process step-by-step provides a genuine log of activities for post-procurement analysis. This log not only simplifies and clarifies record keeping for auditors and compliance officers, it provides both buyers and sellers with information that can be modified or duplicated in future procurement events—thus minimizing costs associated with each new procurement engagement.

"The record of the auction and the necessity to document the procurement process for both Sarbanes-Oxley and GAAP compliance is one of the top reasons I have used this process," says John Lembo, corporate energy manager for Starwood Hotels and Resorts Worldwide.⁴ Lembo also says he collects data on supplier bidding behavior to better understand market conditions and supply trends. Price discovery is a valuable function of the auction process. Energy managers can easily request bids for different

Table 1: Bid history log

Buyers using World Energy Solutions' World Energy Exchange online auction platform can see a bid history log showing supplier (identified by letters A through F), bid price, time, and date. In this example, we see a price drop of 4 percent in less than four minutes of bidding among six bidders.

Supplier company	Bid amount (\$/kWh)	Bid time (a.m.)
F	0.05840	11:11:28
D	0.05810	11:12:20
D	0.05800	11:13:12
A	0.05790	11:13:54
C	0.05760	11:14:12
E	0.05780	11:14:20
B	0.05750	11:14:31
B	0.05841	11:14:33
A	0.05700	11:14:40
F	0.05625	11:14:52
B	0.05691	11:14:53
E	0.05680	11:14:54

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contract time frames and variable peak and off-peak requirements, as well as a mix of conventional and renewable load.

Finally, online auction services can also simplify payment. Both World Energy and another online auction firm, EnergyWindow, are paid by the energy supplier based on the amount of energy delivered to the buyer. The prospective buyer doesn't pay fees directly. Of course, when suppliers formulate their bids, they build the service fees into the bids. These fees range from 0.5 to 1 percent, are standard depending on the level of service provided by the auction firm, and are specified in the agreement with the auction firm.

Interviews with energy managers from Starwood and from a major national retail corporation reveal that freedom from out-of-pocket fees is a major factor in the decision to use online auction services. Both firms cited the ease of paying for this service as one of the top draws. Lembo praises the "logistical and time-saving, cost-reducing factors" of online auctions, noting, "There's an indirect cost associated with obtaining the necessary approvals for out-of-pocket payments."

Considerations for the Energy Manager

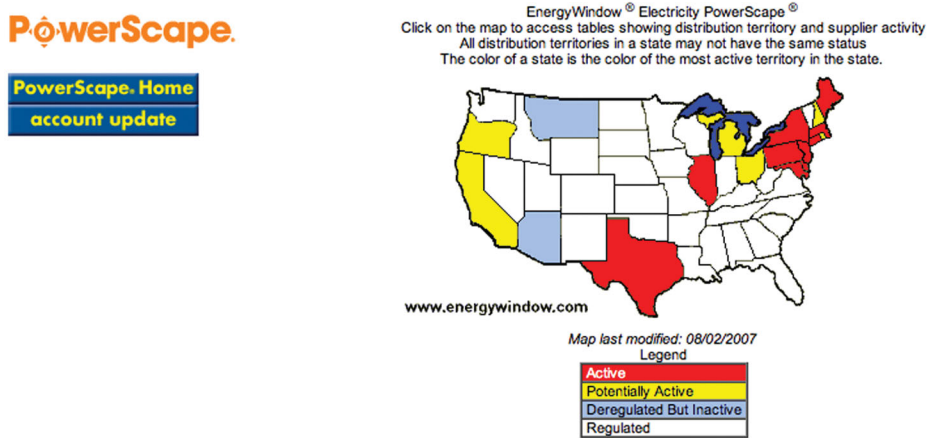
A notable drawback of online retail energy procurement is that it's only applicable in deregulated markets. Moreover, these deregulated markets must also be competitive markets for the commodity in question. Gas can be competitively procured throughout Canada and the U.S., but electricity is another matter: "Viable competitive market opportunities exist for natural gas in almost every Canadian province," notes Jack Mason, president of EnergyWindow, "but for electricity, only Alberta and Ontario sustain viable competitive markets—and significant regulatory uncertainty about the future exists in Ontario."⁵

Currently only 10 U.S. states fit the profile for electricity (**Figure 1**).⁶ According to Adams of World Energy, U.S. states satisfying the competitive requirements for a successful reverse auction are Maryland, Delaware, New Jersey, New York, Connecticut, Massachusetts, Rhode Island, Texas, Illinois, and Maine. In some cases, reverse auctions can also work in Pennsylvania and California. States that are "deregulated" but not competitive enough for online auctions include New Hampshire, Ohio, Michigan, Virginia, Oregon, Arizona, and Montana.⁷

Another consideration is that when using the reverse auction method, buyers procure power at the best available rate at the time of the auction, ensuring a known and stable price for the forward term. But this eliminates flexibility to take advantage of more attractive pricing on the spot markets if energy prices drop. To hedge their bets, energy managers could fix the price for a percentage of their energy needs with a reverse auction contract, and then

Figure 1: Competitive deregulated retail power markets in the U.S.

EnergyWindow's online auction interface includes an interactive Electricity PowerScope map. Buyers and suppliers can identify active competitive markets by state, and click through to show distribution territories and active suppliers. In this map, the color of each state represents the competitive activity of the most active territory in that state, as determined by EnergyWindow.



Courtesy: EnergyWindow Inc.

Many energy managers say the streamlining and detailed documentation of energy procurement using online auctions are at least as important as price.

fill the remaining gaps with spot-price purchases to take advantage of market fluctuations. This decision should be part of the overall procurement strategy for each firm, derived from detailed goals and objectives for the procurement process.

The Process

Energy managers can work directly with a reverse auction provider or engage an energy broker or consultant who in turn uses the services of an auction provider. A third option is to create an in-house auction platform, but this requires recruiting and educating suppliers to use your proprietary system.

When considering direct participation in a reverse auction, the first step is to conduct due diligence on auction specialist firms. As a client, you should expect to receive a full range of services beginning with a needs-based analysis, assistance in compiling the request-for-quote (RFQ) and auction requirements, auction management, and final contract negotiation and agreement.

Consider the specific services offered when selecting an auction provider. For example, the auction firms EnergyWindow and World Energy have their own unique methods to evaluate each client's needs and develop RFQ documentation. Plus, they have their own contract formats and proprietary auction platforms. You can also compare auction providers based on their market expertise. An important service that online auction vendors provide, and that may be even more significant than the particulars of the software platform, is the ability to stay on top of market trends. "One complexity that buyers should consider," suggests Mason, "is that of tariff rates, which can change every three to six months."

Auction firms typically require clients to sign a noncircumvent agreement and an authorization to review and analyze the client's past energy use. The noncircumvent agreement is designed to discourage the buyer from indulging in price discovery tactics without the intention of committing to any of the prices bid during the auction process. It also ensures the auction's integrity and leads to more competitive bidding. Bidding firms must have confidence that the buyer is serious and their efforts invested in working up bids are not in vain. "This does not obligate the client to take the price offered, as that option is always retained by the client," says Adams, adding that "the supplier's price is binding and assures serious bidding competitiveness."

Auction firms analyze relevant tariffs, price-to-beat standards, and forward-price curves to advise buyers on current market conditions. Based on that analysis, and considering the buyer's urgency in getting a contract signed, the buyer can then decide whether to employ a reverse auction strategy, a post-and-respond strategy, or simply wait for a change in market conditions.

For time-constrained energy buyers, reverse auctions offer fast resolution. A reverse auction event usually takes place over a period of days, and the contract negotiation and final agreements are normally completed within hours of the auction. In contrast, the post-and-respond process allows buyers with a longer time horizon to determine a target price internally, and subsequently suppliers are invited to bid down to that price. When bidders hit the target price, the process ends and buyer and seller can work out the final contract.

Buyers also have responsibilities in this process—in particular, their timely response to bids. To take advantage of the best bid posted, you should be prepared to negotiate and sign final agreements. Sellers post prices based on the price economics at the time of the bid (Figure 2).⁸ Prices can fluctuate rapidly and dramatically due to weather, geopolitics, and other factors, and sellers normally stipulate a time frame during which the bid is good. Delays in evaluating and negotiating bids can cause you to miss the best available price at the time of the auction. Energy managers who have successfully used this process are not only very precise in communicating their entity's needs, but are also prepared at the close of the auction to have their legal teams review and conclude any necessary negotiations to finalize contracts quickly.

Another thing you can do to ensure timeliness in a reverse auction is to use a standard contract. In May 2005, EnergyWindow proposed to the North American Energy Standards Board (NAESB) to jointly develop a standardized contract that streamlines

the procurement process. This standard contract, prepared by the NAESB's Retail Contracts Subcommittee and released in February 2007, covers natural gas and electricity purchases.⁹ Mason notes the significance of a standard contract: "Deals weren't closing quickly because of the time taken to finalize traditional contracts. This standard contract helps to decrease transaction risk, which helps to lock in the targeted cost savings."

Renewable Energy Procurement

According to Adams, there's a growing trend for firms and government entities to fulfill internal requirements for renewable energy via online auctions. Procuring renewable energy is well suited for the reverse auction process as buyers can be very specific about their requirements. Buyers can request multiple quotes based on varying amounts of renewable energy as a component of the total power procurement package.

An example of green power acquisition on a large scale through a reverse auction

Figure 2: What bidders see

Bidders participating in an online auction hosted by EnergyWindow can view a quick summary of an open auction, download details of a request-for-quote, and submit a bid online.

The screenshot shows the EnergyWindow website interface. At the top, there is a navigation bar with links for home, products, about us, research & insight, contact, and search. Below this is the "PowerQuote" section, which includes a sidebar with buttons for buyers, sellers, PowerSearch, account update, and fees. The main content area contains a message: "Choose an RFQ below and click on it to see more information!" followed by instructions on how to bid. Below the instructions are input fields for Username/Handle and Password. A table lists RFQs with columns for Request Number/Name, Commodity, Account #, Service Class, Pricing Structure, Term, Quantity Requested, Bidding Period (EST), Attachment, Bid, and AutoBid/Bid (Y/N). The first row shows a request for Electricity with a bid of 91.50 (\$/mwh). Below the table is a "Submit Entries for this Page" button. At the bottom, there is a "Guide To The Icons" section with four icons and their corresponding meanings: Silver RFQ (above average bidding activity), Gold RFQ (high level of bidding activity), a diamond icon (reserve bid not yet met), and a diamond with a plus icon (Dynamic Close feature enabled).

Request Number / Name	Commodity	Account #	Service Class	Pricing Structure	Term	Quantity Requested	Bidding Period (EST)	Attachment	Bid	AutoBid/Bid (Y/N)
518658 Demonstration Summary	Electricity	123456789	GSS	Fixed Price	01/08 - 01/10	261 mwh	11/08/07 08:00AM - 11/08/07 3:30PM	Download	91.50 (\$/mwh)	(\$/mwh)

Submit Entries for this Page

Guide To The Icons

- Silver RFQ - above average level of bidding activity.
- Gold RFQ - high level of bidding activity.
- This RFQ has a reserve bid that has not yet been met.
- This request has a Dynamic Close feature enabled. Requests may extend beyond the posted closing time if bidding is heavy.

Courtesy: EnergyWindow Inc.

process came in early 2006 when the GSA procured from Pepco Energy Services more than 27 million kilowatt-hours (kWh) of wind-generated electricity for the Statue of Liberty and the Ellis Island Immigration Museum.¹⁰ Later, in October 2007, Connecticut used the World Energy Exchange to procure “a high mix of renewable energy” over a 20-month contract period, including more than 134 million kWh of renewable power.¹¹

Demonstrating confidence in the future of competitive renewable energy markets, World Energy has developed a separate platform for green-power procurement. However, any auction firm can help their clients fulfill their green energy requirements, which can easily be woven into any RFQ and posted to an online auction. Using multiple quote requests during a single auction for varying levels of renewable

energy can create price transparency and offer insights into break points for renewable premiums that enable buyers to choose the most cost-effective mix. This allows buyers to maximize fiscal and environmental responsibility. Pricing renewable power in an open-bid environment also enables buyers to check if the premium for renewable power is on par with the price of renewable energy certificates (RECs) available from REC brokers, or compared with the green power offerings of regulated utilities.

Savings and Cost Avoidance

So how do you quantify savings when using a reverse auction? Savings arise from both the price paid for energy and the cost of the procurement process itself.

A buyer’s corporate credit ratings, usage thresholds, load factor, and peak or off-peak

GSA’s In-House Auction Platform

Kevin Myles of the Public Buildings Service of the U.S. General Services Administration (GSA) has been using reverse auctions for energy procurement since early 2002 to meet the energy needs of federal buildings throughout Texas. As he prepares to engage in his third round of energy procurement via reverse auction, planned for mid-2008, he says, “Past experiences have proven effective and efficient for procuring energy and have allowed for greater transparency and cost savings for the GSA.”

The GSA embraced this auction method to the extent that it allocated venture capital funds to the Public Buildings Service to develop the internal auction platform that is now available to GSA offices across the country. Citing the same reasons as other users of the online procurement process, Myles notes, “The open electronic format of the auction allows for time savings, more succinct communications, and a qualified paper trail, which is important to meet government procurement standards.”

The only drawback—a minor one—is that because GSA is using software developed in-house, there’s a bit of a learning curve for new suppliers. More auctions will help overcome this problem. “Three to six suppliers are usually engaged in the active bidding process,” Myles says, “which is comparable to using an outside auction provider.”

requirements all affect pricing. To quantify savings, you can use year-over-year price assessment, which can, assuming conditions are equal, show the extent of price differential for a particular energy procurement event compared with a prior time frame. Another method would be to analyze forward-price curves to set a baseline, and quantify savings based on how far the procured price beats that baseline. Whatever method you choose, always use caution and a disciplined quantitative approach to establish a fair estimate of true savings.

It's also important to keep in mind that you may not be able to precisely quantify savings from using a reverse auction compared with traditional procurement methods for a given energy purchase. That's because some of the savings are really avoided costs. You may not be able to determine what price would otherwise have been available at that time via another procurement process or via vendors that don't participate in the auction. Be prepared to set cost savings goals commensurate with the risk of procuring energy in an auction environment for fixed periods. In other words, be prepared for the risk that the price will drop after you sign a contract.

Some procurement savings are fairly concrete. When assessing the pros and cons of online procurement, consider the fees for using traditional RFQ methods, related consulting fees, and the time and resource costs associated with having internal staff work with suppliers individually. "Our experience is that decision-makers from the buyer's firm can cut their time invested from weeks to just hours," Mason says, "which provides a significant savings in itself."

It's impossible to guarantee that every energy manager can expect substantial savings from a reverse auction—there are

simply too many variables involved in each unique purchase event to make any generalized claims. Claims of savings announced in press releases tend to be vague, merely citing a dollar value or a percentage, with little detail about the event. Many press releases cite savings of 5 to 30 percent. This range is very broad possibly because of each customer's particular requirements and because the comparison price used to estimate avoided costs is unique in each case. Additionally, the buyer's time savings depends on the complexity of the RFP.

For Lembo, the potential savings for Starwood from using an online auction are important but do not overshadow the other benefits. "We think we got a good price for the point in time we went out for bids," Lembo explains, describing his experience in an online reverse auction. "On the question of whether we got a better price than the traditional RFQ method, we think the price was comparable."

Who Benefits?

Reverse auction procurement strategies can be appropriate for some buyers in deregulated markets with competitive characteristics. In particular, they can be beneficial for buyers with significant energy needs and who are fairly risk averse and willing to lock into energy purchase agreements. Additionally, buyers with limited procurement staff and who work well in a collaborative environment with outside service providers could find that this process saves time and is cost-effective. Energy managers can access valuable expertise when they use auction facilitators, who become an extension of the buyer's procurement shop. The benefits of market transparency and a paper trail, open communications, process redundancy, and access to market expertise are all important considerations for the buyer.

Reverse auction procurement can be appropriate for buyers with significant energy needs and who are fairly risk averse.

Notes

- 1 Phil Adams (October 2007), President and Chief Operating Officer, World Energy Solutions Inc., 800-578-0718.
- 2 Kevin Myles (October 2007), Manager, Public Buildings Service Greater Southwest Region, U.S. General Services Administration, 817-978-9942, kevin.myles@gsa.gov.
- 3 Phil Adams [1].
- 4 John Lembo (October 2007), Energy Director, Starwood Hotels and Resorts Worldwide Inc., 914-640-8464.
- 5 Jack Mason (November 2007), President, EnergyWindow Inc., 303-444-2366, jmason@energywindow.com.
- 6 Christa Lassen-Vogel (November 2007), Director of Marketing, EnergyWindow, 720-890-9412, classenv@energywindow.com.
- 7 Phil Adams [1].
- 8 Christa Lassen-Vogel [6].
- 9 Supply & Demand-Chain Executive, "Energy Standards Board Issues Standardized Energy Contract" (February 27, 2007), [www.sdexec.com/web/online/SourcingProcurement-News/Energy-Standards-Board-Issues-Standardized-Energy-Contract/27\\$9231](http://www.sdexec.com/web/online/SourcingProcurement-News/Energy-Standards-Board-Issues-Standardized-Energy-Contract/27$9231).
- 10 Pepco Energy Services, "PEPCO Energy Services Supplies 100% Renewable Energy to the Statue of Liberty and Ellis Island," press release (February 20, 2006), www.pepcoenergy.com/NewsAndEvents/PressReleaseDetail.aspx?PressReleaseId=51.
- 11 World Energy Solutions Inc., "State of Connecticut Completes Renewable Energy Auction with World Energy," press release (October 18, 2007), www.worldenergy.com/about/newsevents/press/default.cfm?pressID=32.