



An Energy-Efficiency Workshop and Exposition
Orlando, Florida

The Good, The Bad and the Ugly of Power Buying and Aggregation

A Presentation by

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Briefing Overview

- Overview
- Opportunities and Challenges
- Electronic Procurement Tools
- Advantages
- Process
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- Summary

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Overview

Through the use of e-commerce online reverse auction procurements, we are able to streamline the process and focus more time on the critical aspects of energy procurements.

Contractor handles more time consuming tasks associated with energy procurements, i.e. historical usage data collection, data formatting, auction scheduling, etc.

Contractor services are 100% performance based, i.e. no-upfront cost to Government.

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Deregulation's Opportunities and Challenges

- Deregulation provides the Federal Government the opportunity to receive competitive pricing for its energy requirements
- Our Reverse Auction Contractor provides:
 - Expertise in local market rules
 - Knowledge of current pricing and future trends
 - Ability to package energy loads in a way that attracts as many suppliers to bid as possible
 - Experience in energy acquisition
- Energy Procurements for Federal clients tend to be complex transactions based on:
 - Federal Contract Terms and Conditions
 - Regional/national market differences
 - Differing load factors
 - Individual client price and service preferences

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Electronic Procurement Tools

- In the Spring of 2000, GSA decided to implement solutions that mirror how industry procures energy.
- GSA contracted with the team of Science Applications International Corporation (SAIC) and World Energy Solutions (WES) to provide the reverse auction platform and pre and post auction services.
- GSA has been working with this team since Spring of 2001, and as a result GSA's customers have benefited from increased competition between Energy Service Providers (ESPs) in Deregulated markets resulting in lower competitive market pricing.

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What is the Tool?

GSA contracts out to the SAIC/WES team to provide a "Supplier-Neutral Electronic Reverse Energy Auction"

Supplier – Neutral – **The team has no vested interest in who wins the procurement**

Electronic – **Procurements are performed online allowing ESP's to compete against one another based on real-time pricing information**

Reverse Energy Auction – **Energy Suppliers bid prices down vs. up.**

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The E-Commerce Tool

Customer requirements can be satisfied with less work as different pricing terms and types can easily be accommodated

The electronic platform allows for multiple bids for each account:

- Bids for one, two, and three year terms
- full or partial green power bids
- fixed, index, or index plus baseload pricing
- Multiple LDCs, States, and rate classes can be served

In addition, the tool:

- Provides an audit trail of prices and bid times
- Allows auctions to be held open for a period of weeks or months if necessary with minimal effort expended
- suppliers can propose alternative terms or bid prices if requested by the Contracting Officer

Advantages

- Receive a variety of services at no cost upfront including: market summaries, price to beat analysis, a well-marketed and informed supplier base, and the benefits of real-time price competition
- Receives and compares the most competitive prices available for varying service terms and pricing types to make informed decisions.
- Aggregates facilities with same/similar load requirements as well as the same LDC Rate Class

Processes outsourced to SAIC/ WES

Pre-Auction

Auction

Post-Auction

- Provide Deregulation and Market Expertise
- Aggregate Account Data
- Perform Market Analysis to create Price-to-Beat (elec)
- Assist in Creating Solicitation
- Identify, Pre-qualify, Suppliers
- Host Bidders Conferences and Provide Minutes
- Post Account Data and Auction Rules

- Segment the Load and Architect the Series of Auctions by
 - LDC
 - Term length
 - Pricing model
 - Power type (elec)
 - Load factor (elec)
- Administer the Auction

- Provide an Audit Trail of All Prices Submitted
- Provide Due Diligence and Price Analysis to Ensure Timely Awards
- Assist in Ensuring Account Service is Transferred Correctly
- Bill and Tariff Analysis Services
- On-line database of usage for energy management analysis

Reverse Auction Maximizes Market Competition

Typically 3-6 suppliers bidding 5-10 times

| REF ID | REF Created* | REF Type | Index | Starting Month | Ending Month | Date Quoted Required* | Status | Weighted Average Fixed Price in \$ per unit | | | |
|---|--------------------|----------|-------|----------------|--------------|-----------------------|---------------------------|---|----------|----------|---------------------------------|
| | | | | | | | | Low Bid | Year Bid | High Bid | |
| NY - Con Edison World Energy Exchange Commercial/Industrial Electricity | | | | | | | | | | | |
| R35550947 | 01/10/2002 6:55 am | Fixed | | February 2002 | January 2003 | 01/10/2002 9:00 pm | Bid Submitted by Supplier | 0945 | 0945 | 0945 | Supplier 1 bids |
| R35550947 | 01/10/2002 6:55 am | Fixed | | February 2002 | January 2003 | 01/10/2002 9:00 pm | Bid Submitted by Supplier | 0904 | 0945 | 0945 | Supplier 2 enters lower price |
| R35550947 | 01/10/2002 6:55 am | Fixed | | February 2002 | January 2003 | 01/10/2002 9:00 pm | Bid Submitted by Supplier | 0872 | 0945 | 0945 | Supplier 3 enters lower price |
| R35550947 | 01/10/2002 6:55 am | Fixed | | February 2002 | January 2003 | 01/10/2002 9:00 pm | Bid Submitted by Supplier | 0838 | 0945 | 0945 | Supplier 2 beats supp 3 price |
| R35550947 | 01/10/2002 6:55 am | Fixed | | February 2002 | January 2003 | 01/10/2002 9:00 pm | Bid Submitted by Supplier | 0798 | 0945 | 0945 | Supplier 1 enters winning price |

Secure Price and Winning Supplier

Real Price Comparison Example

GSA's 2003 Texas Electricity Auction

Benchmark Simple Contract Savings

| Term months | Consumption kWh | Best Bid \$/kWh | Benchmark* \$/kWh | Unit Savings \$/kWh | Savings \$ |
|-------------|-----------------|-----------------|-------------------|---------------------|------------|
| 12 | 6,512,891 | 0.0698 | 0.0813 | 0.0115 | 75,128 |
| 24 | 13,025,782 | 0.0572 | 0.0813 | 0.0241 | 314,381 |
| 36 | 19,538,673 | 0.0556 | 0.0813 | 0.0257 | 502,833 |

*Simple benchmark based upon current rates, with no market pricing forecast scenarios.

Benchmark Scenario Analysis

| Scenario | Probability | Annual Growth | Year 1 | Year 2 | Year 3 | Average 24 Month | Average 36 Month |
|------------------------------|-------------|---------------|--------|--------|--------|------------------|------------------|
| 1 | 30% | 10% | 0.0895 | 0.0984 | 0.1083 | 0.0930 | 0.0957 |
| 2 | 50% | 3% | 0.0838 | 0.0863 | 0.0889 | 0.0850 | 0.0863 |
| 3 | 20% | -5% | 0.0773 | 0.0734 | 0.0697 | 0.0753 | 0.0735 |
| Probability-Weighted Average | | | 0.0842 | 0.0874 | 0.0909 | 0.0858 | 0.0875 |

Probability-Weighted Scenario Contract Savings

| Term months | Consumption kWh | Best Bid \$/kWh | Benchmark* \$/kWh | Unit Savings \$/kWh | Savings \$ |
|-------------|-----------------|-----------------|-------------------|---------------------|------------|
| 12 | 6,512,891 | 0.0698 | 0.0842 | 0.0144 | 93,669 |
| 24 | 13,025,782 | 0.0572 | 0.0858 | 0.0286 | 372,095 |
| 36 | 19,538,673 | 0.0556 | 0.0875 | 0.0319 | 622,599 |

Results

- GSA has procured over \$289M in electricity and natural gas for twelve Federal agencies using the online procurement process.
 - \$216M in Electricity Procurements in three states since April 2001
 - \$73M in Natural Gas Procurements in nineteen states plus the District of Columbia during the past year



Summary

The reverse auction energy procurement avoids duplication of efforts, saves time and resources and allows Federal agencies and organizations to focus their attention on critical missions.

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Summary

GSA has effectively served clients for over two years using innovative procurement tools such as reverse auctions. These tools have allowed GSA to:

- Outsource tasks at no-upfront costs
- Work efficiently and focus on critical issues
- Increase ESP participation and competition
- Provide customers with the lowest cost energy available in their local market that meets Government contract terms and conditions

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