Reverse Auctioning – Producing Solid, Defensible Savings in Military Acquisition: An Analysis of the Experience of the Army Contracting Command (ACC)

A Research Report from
The Reverse Auction Research Center

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Disclaimer
This study is not necessarily the official views of or endorsed by the U.S. Government, the Department of the Army or the Army Contracting Command.

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The Reverse Auction Research Center
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Reverse Auctioning – Producing Solid, Defensible Savings in Military Acquisition: An Analysis of the Experience of the Army Contracting Command (ACC)

IN BRIEF

This research report is an analysis of the (Army Contracting Command) ACC’s acquisition cost savings achieved through reverse auctioning. The study consists of two parts:

• The first part presents an examination of the ACC’s overall savings, achieved by using FedBid’s reverse auction-based online marketplace. It shows that over the past four fiscal years (FY2007-FY2011), the agency saved, in aggregate, almost $150 million.

• The second part details findings of our three-stage robust screening technique, which removed FedBid acquisitions to eliminate any question regarding the presence or accuracy of the Independent Governmental Cost Estimate (IGCE) – a.k.a., procurement target price. The analysis shows relatively consistent savings levels across the ACC’s acquisition categories. The greatest variances were found in open market acquisitions, which comprise the majority of ACC acquisition activities. In actions involving only suppliers on the GSA Schedule and Army CHESS, the difference between the ACC’s aggregate savings and screened results was relatively small.

Overall, as the research in this report details, the agency’s savings (11.5% in FY2011 and 9.9% over the most recent four fiscal years – FY2007-FY2011) present a more precise, defensible savings percentage than any other review of federal agency reverse auction use published to date. In discussing these findings, Mr. Bryon Young, the Executive Director of the Army Contracting Command – Aberdeen Proving Ground (ACC-APG), a major contracting center for the ACC, commented that: “The precise measurement of cost savings in a process like reverse auctioning is always hard to do. I believe we have achieved verifiable cost savings that have resulted in improved buying power for the Army. The Reverse Auctioning process clearly works to our benefit as a procuring activity.”
Reverse Auctioning – Producing Solid, Defensible Savings in Military Acquisition: An Analysis of the Experience of the Army Contracting Command (ACC)

INTRODUCTION
Reverse auctioning is becoming widely recognized as a key method for acquisition to “do more without more”. As demonstrated in previous analyses by the Reverse Auction Research Center, a number of federal agencies, including the Department of State\(^1\) and the Department of Homeland Security\(^2\) have found using reverse auctioning produces significant cost savings across a wide variety of goods and services. A recent report from the Center’s Director, Dr. David Wyld, *Reverse Auctioning: Saving Money and Increasing Transparency*\(^3\), proved that even conservative reverse auctioning use could produce billions of dollars in annual savings for the entire federal government, with the largest acquisition savings potential found in the government’s largest procurer, the Department of Defense (DoD).

The ACC has, as part of its overall procurement mission, the responsibility for supplying all the equipment, goods and services needed to run army installations other than those in active combat operations. To accomplish its vital support mission, the ACC must procure a vast array of goods and services worldwide. Thus, it is mission-critical to ensure the ACC use the right sourcing method for every acquisition, in order to deliver the maximum support for U.S. Army operations at minimum cost. The ACC is a leader in demonstrating how reverse auctions play a vital role in producing acquisition savings while improving competition and transparency in military acquisition.

This research delves into the first-level question regarding the use of reverse auctions, with specific focus on demonstrated savings readily achieved through the use of this acquisition strategy. As will be shown through this analysis of the ACC experience, the savings are significant and irrefutable. This study is important in that it provides acquisition leaders and policy makers with the most solid, defensible numbers to date on reverse auction savings in the DoD and the federal sector.
THE ACC AND REVERSE AUCTIONS

The Overall Picture

In FY2011 alone, the ACC executed a total of $1,939,437,962 in contracts for simplified acquisitions.\(^1\) Of this total, almost a quarter of a billion ($249,482,823) in goods and services were acquired through 4,786 award actions sourced through reverse auctions transacted through FedBid. As can be seen in Figure 1 (ACC Reverse Auction Savings, FY2011), through employing FedBid as a primary method for increasing competition in such governmental contracting opportunities, ACC reverse auctions produced an aggregate savings of $41,706,660 in FY2011 alone over the Independent Governmental Cost Estimate (IGCE) figure that would have had the agency expending almost $300 million ($291,189,483) for those same goods and services. The ACC has, in fact, been utilizing reverse auctions for a number of years, and since 2007, the ACC – the Army’s main arm for “routine” operations – has saved almost $150 million on over $1 billion worth of reverse auction-based acquisitions (as shown in Figure 2 – ACC Reverse Auction Savings, FY2007-2011).

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\(^1\) SAP - Simplified Acquisition Procedure - Contains all buys from $3K to $6.5 million. Note that the SAP test threshold of $6.5 million expired as of December 31, 2011.
**Breaking Down the Savings**

In order to pinpoint the source of savings from reverse auctions, we broke down the ACC’s FedBid acquisitions by procurement type. These actions fell into three principal categories:

1. **Open Market** – Competitions that have no pre-determined source pool, open to all capable and qualified bidders.
2. **GSA Schedules** – Competitions amongst a limited pool of bidders who qualified for pre-competed, government-wide contracts the federal government has for commercial products and services at volume discount pricing.
3. **Army CHESS** – Competitions amongst a limited pool of bidders who qualified for the "Computer Hardware, Enterprise Software and Solutions" program, which is the Army's designated primary source for commercial IT products.

A limited number of transactions – approximately one percent of the total for the agency – did not fall into one of these three areas, and were classified as “Other”.
• **FY2011 Analysis**

FY2011 procurements are shown in Table 1 (*ACC Acquisitions via Reverse Auctioning, FY2011*). As seen in Figure 3 (*Aggregate ACC Acquisition Reverse Auction Spend, FY2011*), the 4,786 simplified acquisitions conducted in the past full fiscal year fell into the three categories, with two-thirds of the reverse auction-based acquisitions coming in the open market category. In fact, while the ACC saw 14.3% acquisition savings through the use of competitive bidding, open market competitions produced an even higher level of savings – 17.7%. This is not surprising on the surface, for in open market competitions, competition between all qualified and interested suppliers occurs on any given acquisition. While 67% ($167.5 million) of the amount awarded in simplified acquisitions came from open market competitions ($249.5 million), fully 87% ($36 million) of the ACC’s aggregate auction savings ($41.7 million) came from such open market competitions (as can be seen in Figure 4 – *Aggregate ACC Acquisition Reverse Auction Savings, FY2011*).

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>Awards (#)</th>
<th>IGCE ($)</th>
<th>Awarded ($)</th>
<th>Savings ($)</th>
<th>Savings (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN MARKET</td>
<td>3,538</td>
<td>$203,524,761</td>
<td>$167,454,556</td>
<td>$36,070,205</td>
<td>17.7%</td>
</tr>
<tr>
<td>GSA SCHEDULES</td>
<td>638</td>
<td>$29,785,238</td>
<td>$27,617,029</td>
<td>$2,168,209</td>
<td>7.3%</td>
</tr>
<tr>
<td>ARMY CHESS</td>
<td>590</td>
<td>$57,463,145</td>
<td>$54,031,931</td>
<td>$3,431,214</td>
<td>6.0%</td>
</tr>
<tr>
<td>OTHER</td>
<td>20</td>
<td>$416,339</td>
<td>$379,308</td>
<td>$37,031</td>
<td>8.9%</td>
</tr>
<tr>
<td>ACC Overall</td>
<td>4,786</td>
<td>$291,189,483</td>
<td>$249,482,823</td>
<td>$41,706,660</td>
<td>14.3%</td>
</tr>
</tbody>
</table>

*Figure 3*
In contrast, in both GSA Schedules and Army CHESS acquisitions, competition takes place only among suppliers that qualified to be included in these pre-competited categories. In other words, while open market competitions represent a *first-order* competition (generating savings among a wider array of competitors), the latter two acquisition categories can be seen as a *second-order* competition. This is because it represents a reverse auction that occurs on top of the competitive positions suppliers must take in order to be included on GSA Schedules and/or in the Army CHESS program. In this limited array of pre-qualified vendors, the competition is opportunity-specific for the exact items or services being competed in that particular acquisition. As such, the savings garnered by the ACC in such auctions represents a clear, gross savings over the prices that the DoD would have paid under the standard government contracts. Thus, the over $2 million (or an additional 7.3%) in savings achieved on 638 GSA Schedule reverse auctions, and the almost $3.5 million (or an additional 6%) in savings from 590 Army CHESS reverse auctions, in FY2011 can be directly attributed to ACC acquisition personnel’s use of reverse auctions through the FedBid online marketplace.

**Four-Year (FY2007-2011) Analysis**

In this examination of ACC acquisition data for the past four fiscal years (FY2007-FY2011), the savings generated via use of reverse auctioning and FedBid were even more dramatic in terms of the power of the growing use of the acquisition tool within the contracting command. As seen in Table 2 (Total ACC Acquisitions via Reverse Auctioning, FY2007-2011), in this time period under review, the ACC conducted reverse auctions resulting in over 21,000 awards, totaling $937 million. In aggregate, these actions have produced $148 million in savings for the taxpayer. As can be seen in Figure 5 (Aggregate ACC Reverse Auction Acquisition Spend, FY2007-2011), open market competitions accounted for well over half (59%) of the awarded...
dollars. The over 13,000 open market actions competed through FedBid produced $112 million in savings over the four-year period, which, seen in Figure 6 (Aggregate ACC Acquisition Savings, FY2007-2011), amounted to over three-quarters of the $148 million in reverse auction-generated savings.

Table 2 – Total ACC Acquisitions via Reverse Auctioning, FY2007-2011

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>Awards (#)</th>
<th>IGCE ($)</th>
<th>Awarded ($)</th>
<th>Savings ($)</th>
<th>Savings (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN MARKET</td>
<td>13,682</td>
<td>$667,441,090</td>
<td>$555,221,695</td>
<td>$112,219,395</td>
<td>16.8%</td>
</tr>
<tr>
<td>GSA SCHEDULES</td>
<td>4,747</td>
<td>$227,369,389</td>
<td>$204,792,715</td>
<td>$22,576,674</td>
<td>9.9%</td>
</tr>
<tr>
<td>ARMY CHESS</td>
<td>2,374</td>
<td>$175,453,852</td>
<td>$163,675,965</td>
<td>$11,777,887</td>
<td>6.7%</td>
</tr>
<tr>
<td>OTHER</td>
<td>570</td>
<td>$15,493,445</td>
<td>$13,787,739</td>
<td>$1,705,706</td>
<td>11.0%</td>
</tr>
<tr>
<td>ACC Overall</td>
<td>21,373</td>
<td>$1,085,757,776</td>
<td>$937,478,114</td>
<td>$148,279,662</td>
<td>13.7%</td>
</tr>
</tbody>
</table>

Figure 5

CLARIFYING THE MATTER OF REVERSE AUCTION SAVINGS

Overview

In order to further refine the precise nature and amount of potential reverse auction savings, the author analyzed the ACC’s FY2007-FY2011 acquisition spending data. The goal was to excise any buys where there could be significant doubt cast upon the IGCE. The IGCE, commonly known as the “target price”, is typically used as the starting point for measuring a reverse
auction’s savings. On FedBid, the target price definition specifies that it is “usually based on a published catalog price or valid market research quote”.

One common reverse auction-related criticism questions the legitimacy of savings calculations vis-à-vis the target price. This analysis seeks to eliminate such criticisms by applying a far more stringent filter to the ACC savings data than typically performed on a federal agency’s reverse auction acquisition activity, with the goal of minimizing the impact of target prices that were most likely not based on accurate market research. In doing so, details and insights can be gleaned and prove helpful for the ACC, other federal agencies, acquisition observers and policy makers.

In this analysis, the author applied three screens to the ACC data, eliminating any of the awards meeting the following criteria:

1. Awards made pursuant to auctions with an inactive target price (where no a priori target price had been established for the reverse auction).
2. Awards made pursuant to auctions with an a priori target price set too high, as demonstrated by apparent resulting cost savings of 50% or more.
3. Awards made pursuant to auctions with an a priori target price set too low, as demonstrated by negative resulting cost savings (a final price higher than the target price). These buys reflect irrational data and are typically based on inaccurate or no market research data (e.g., research quote received from a large business for a small business procurement; use of outdated historical data; no market research; etc.). Negative savings is irrational under the FedBid model because there is no requirement for buyers to award through FedBid when pricing exceeds available offline pricing.
This analysis presents a more refined picture of the true scope of reverse auction cost savings generated through the ACC’s FedBid use, eliminating all awards where there was either an inactive, invalid or inaccurate IGCE.

**Applying the Data Screening Technique**

While a percentage of buys over the four year period (FY2007-FY2011) under review were eliminated through this method, it proved that the vast majority of ACC reverse auctions indeed had a valid target price and satisfied the three screening criteria in regards to this threshold. As seen in Figure 7 (Applying the Three Screens to ACC R.A. Acquisitions [Number of Buys]), 2133 acquisitions — approximately 10 percent of all reverse auction-based awards met one of the three screening criteria and were therefore eliminated from the aggregate four years of data. For FY2011, a slightly higher percentage of awards (17.8%) met one of the three screening criteria and were eliminated. In all, the final screened data for the FY2007-2011 period totaled 19,240 acquisition actions, and FY2011 totaled 3,933 awards.

![Figure 7](image-url)
As seen in Figure 8 (Applying the Three Screens to ACC R.A. Acquisitions [Total Spend]) and Figure 9 (Applying the Three Screens to ACC R.A. Acquisitions [Total Savings]), eliminating the reverse auction purchases that did not satisfy the three criteria produced the expected negative impact on the total amount of the ACC’s reverse auction acquisition spending and savings. To clarify, the total results on savings achieved by ACC (as previously discussed in this research report) can be seen as valid, as the data set contained relatively few “outliers”, and the “screened results” show irrefutable cost saving results. Again, we consider both the results from the most recent fiscal year (FY2011) and the past four fiscal years (FY2007-FY2011).

• **FY2011 Analysis**

A summary of the 3,933 awards that passed the filtering analysis is shown in Table 3 (FY2011 Filtered ACC Reverse Auction Activity Data Summary). The $198 million in awards that passed the screen represent 88.5% of all dollars awarded – meaning a higher percentage of awarded dollars than award actions (82.2%) are included in this data set. Thus, while there may have been more outlier actions during this specific fiscal year than in the four years under review, the overall dollar cost savings achieved in FY2011 was in line with the four-year average savings realized by the ACC.
Table 3 – FY2011 Filtered ACC Reverse Auction Activity Data Summary

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>Awards (#)</th>
<th>IGCE ($)</th>
<th>Awarded ($)</th>
<th>Savings ($)</th>
<th>Savings (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN MARKET</td>
<td>2,850</td>
<td>$144,766,608</td>
<td>$124,066,904</td>
<td>$20,699,704</td>
<td>14.3%</td>
</tr>
<tr>
<td>GSA SCHEDULES</td>
<td>544</td>
<td>$25,087,364</td>
<td>$23,007,142</td>
<td>$2,080,222</td>
<td>8.3%</td>
</tr>
<tr>
<td>ARMY CHESS</td>
<td>524</td>
<td>$54,290,276</td>
<td>$51,238,682</td>
<td>$3,051,594</td>
<td>5.6%</td>
</tr>
<tr>
<td>OTHER</td>
<td>15</td>
<td>$337,874</td>
<td>$327,700</td>
<td>$10,174</td>
<td>3.0%</td>
</tr>
<tr>
<td>ACC Overall</td>
<td>3,933</td>
<td>$224,482,122</td>
<td>$198,640,429</td>
<td>$25,841,693</td>
<td>11.5%</td>
</tr>
</tbody>
</table>

How did the final, screened results for FY2011 hold up versus the unscreened data? As was expected, the overall results are similar. As seen in Figure 10 (Screened ACC Reverse Auction Spend, FY2011), the breakdown of the filtered aggregate spend closely mirrored the overall agency reverse auction results in dollar terms (see Figure 3 – Aggregate ACC Reverse Auction Acquisition Spend, FY2011). And, as shown in Figure 11 (Screened ACC Reverse Auction Savings, FY2011), the summary of savings achieved in the most recent full fiscal year (FY2011) was in-line with the overall savings attained by the agency through reverse auction-based acquisitions (see Figure 4 – Aggregate ACC Reverse Auction Savings, FY2011).
In FY2007-FY2011 Analysis

The complete data set of reverse auction acquisitions for FY2007-FY2011 was analyzed using the same screening techniques. The results are summarized in Table 4 (FY2007-2011 Filtered ACC Reverse Auction Activity Data Summary).
Table 4 – FY2007-2011 Filtered ACC Reverse Auction Activity Data Summary

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>Awards (#)</th>
<th>IGCE ($)</th>
<th>Awarded ($)</th>
<th>Savings ($)</th>
<th>Savings (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN MARKET</td>
<td>12,003</td>
<td>$528,507,727</td>
<td>$465,851,349</td>
<td>$62,656,378</td>
<td>11.9%</td>
</tr>
<tr>
<td>GSA SCHEDULES</td>
<td>4,450</td>
<td>$209,952,415</td>
<td>$192,693,639</td>
<td>$17,258,775</td>
<td>8.2%</td>
</tr>
<tr>
<td>ARMY CHESS</td>
<td>2,263</td>
<td>$166,774,989</td>
<td>$156,785,402</td>
<td>$9,989,586</td>
<td>6.0%</td>
</tr>
<tr>
<td>OTHER</td>
<td>524</td>
<td>$14,714,523</td>
<td>$13,391,879</td>
<td>$1,322,644</td>
<td>9.0%</td>
</tr>
<tr>
<td>ACC Overall</td>
<td>19,240</td>
<td>$919,949,654</td>
<td>$828,722,270</td>
<td>$91,227,384</td>
<td>9.9%</td>
</tr>
</tbody>
</table>

Overall, the screened results show that for the over $800 million in awards satisfying criteria related to viable target price, the ACC achieved over $90 million in savings. While the overall 9.9% screened savings rate is significantly lower than the aggregate reverse auction savings of 13.7% (see Table 2 – Total ACC Acquisitions via Reverse Auctioning, FY2007-2011), there are important findings within the different categories of spend that account for the savings calculation differential. Additionally, the spending and savings breakdowns by category of purchase (Open Market, GSA Schedule, Army CHESS, and Other) for both overall spend and savings are presented in Figures 12 (Screened ACC Reverse Auction Spend, FY2007-2011) and 13 (Screened ACC Reverse Auction Spend, FY2007-2011). Again, one can compare these breakdowns to the aggregate data for the four years under review in Figures 5 (Aggregate ACC Reverse Auction Acquisition Spend, FY2007-2011) and 6 (Aggregate ACC Reverse Auction Acquisition Savings, FY2007-2011) and find differences between the spend categories. These differences – both in regards to the total savings numbers and the savings by acquisition type – are detailed in the next section of the analysis.

Figure 12

Reverse Auctioning – Producing Solid, Defensible Savings in Military Acquisition
Analysis

Overall, the screened results still showed an overall 11.5% savings rate for the ACC through its reverse auction acquisitions conducted in FY2011, and a 9.9% savings over the most recent four fiscal years (FY2007-2011). In terms of the aggregate and screened savings, as seen in both Tables 5 (Comparison of ACC Acquisition Aggregate vs. Screened Savings – FY2011) and 6 (Comparison of ACC Acquisition Aggregate vs. Screened Savings – FY2007-2011), there were significant differences between the aggregate and screened savings results. In FY2011, the overall savings rate for the agency was lowered from 14.3% to 11.5% – a -2.81% savings differential (representing 19.65% of the overall savings). For the four-year period under review (FY2007-2011), the ACC’s screened savings rate was found to be 9.9%, rather than the aggregate 13.7%. This represents a -3.74% difference in the savings rate and 27.3% of the overall savings produced through the agency’s use of reverse auctioning.

What accounts for this considerable differential in reverse auction savings levels between the aggregate and screened data? The answer lies in the establishment of target prices for the four subcategories of the ACC’s overall acquisition activity. First, due to the small percentage of acquisitions in the “Other” (unclassified) category and the uncertainty regarding what is included in this category, this class of spending should be eliminated from further analysis. In
Table 5 – Comparison of ACC Acquisition Aggregate vs. Screened Savings, FY2011

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>Aggregate Savings ($)</th>
<th>Screened Savings ($)</th>
<th>Differential</th>
<th>Aggregate Savings (Percentage)</th>
<th>Screened Savings (Percentage)</th>
<th>Differential</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN MARKET</td>
<td>$36,070,205</td>
<td>$20,699,704</td>
<td>-$15,370,502</td>
<td>17.7%</td>
<td>14.3%</td>
<td>-3.42%</td>
</tr>
<tr>
<td>GSA SCHEDULES</td>
<td>$2,168,209</td>
<td>$2,080,222</td>
<td>-$87,987</td>
<td>7.3%</td>
<td>8.3%</td>
<td>-1.01%</td>
</tr>
<tr>
<td>ARMY CHESS</td>
<td>$3,431,214</td>
<td>$3,051,594</td>
<td>-$379,621</td>
<td>6.0%</td>
<td>5.6%</td>
<td>-0.35%</td>
</tr>
<tr>
<td>OTHER</td>
<td>$37,031</td>
<td>$10,174</td>
<td>-$26,857</td>
<td>8.9%</td>
<td>3.0%</td>
<td>-5.88%</td>
</tr>
<tr>
<td>FY2011 Total</td>
<td>$41,706,660</td>
<td>$25,841,693</td>
<td>-$15,864,967</td>
<td>14.3%</td>
<td>11.5%</td>
<td>-2.81%</td>
</tr>
</tbody>
</table>

Table 6 – Comparison of ACC Acquisition Aggregate vs. Screened Savings, FY2007-2011

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>Aggregate Savings ($)</th>
<th>Screened Savings ($)</th>
<th>Differential</th>
<th>Aggregate Savings (Percentage)</th>
<th>Screened Savings (Percentage)</th>
<th>Differential</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN MARKET</td>
<td>$112,219,395</td>
<td>$62,656,378</td>
<td>-$49,563,017</td>
<td>16.8%</td>
<td>11.9%</td>
<td>-4.96%</td>
</tr>
<tr>
<td>GSA SCHEDULES</td>
<td>$22,576,674</td>
<td>$17,258,775</td>
<td>-$5,317,898</td>
<td>9.9%</td>
<td>8.2%</td>
<td>-1.71%</td>
</tr>
<tr>
<td>ARMY CHESS</td>
<td>$11,777,887</td>
<td>$9,989,586</td>
<td>-$1,788,301</td>
<td>6.7%</td>
<td>6.0%</td>
<td>-0.72%</td>
</tr>
<tr>
<td>OTHER</td>
<td>$1,705,706</td>
<td>$1,322,644</td>
<td>-$383,062</td>
<td>11.0%</td>
<td>9.0%</td>
<td>-2.02%</td>
</tr>
<tr>
<td>FY2011 Total</td>
<td>$148,279,662</td>
<td>$91,227,384</td>
<td>-$57,052,278</td>
<td>13.7%</td>
<td>9.9%</td>
<td>-3.74%</td>
</tr>
</tbody>
</table>

each period under consideration (both for the four year period and for FY2011 alone), this classification only accounted for 1-2% of the total spend channeled to reverse auction competition, with savings numbers proportional to this relatively small percentage of the overall ACC acquisition activities.

Open market purchases accounted for the majority of the ACC’s reverse auction spend, producing the largest overall savings results. The greatest differential in aggregate vs. screened savings by far was found in this category as well. In FY2011 alone, while the screened savings rate for open market purchases was an impressive 14.3%, it was still significantly below the 17.7% aggregate savings rate (see Table 5 – Comparison of ACC Acquisition Aggregate vs. Screened Savings, FY2011). In fact, the -3.42% differential represented 19.32% of the overall savings from reverse auctioning in the open market classification. Quite similarly, for the full
four years under review (FY2007-2011), the screened savings rate was 11.9%, -4.96% lower than the aggregate savings. In dollar terms, the screening reduced the level of reverse auction savings by just over $15 million for FY2011 and almost $50 million for the four-year period from FY2007-2011.

With open market purchases, acquisition personnel establish target prices much differently than they would using GSA Schedule and Army CHESS contracts. In the latter case, the target price is typically the negotiated contract price published in those vehicles. In the case of open market purchases, the buyer will more often use commercially available online research tools, such as Google, or solicit market research quotes external to a competitive procurement process.

As the IGCE for open market purchases is set using variable baselines, the accuracy of the open market IGCE tends to vary considerably not only across time, but across organizational units and even individuals. While the present research does not seek to go beyond the overall agency level of analysis, this perhaps needs further examination to answer the obvious question as to whether or not there are particular areas/categories/units/persons where the IGCEs are not being set or are being set particularly inaccurately.

Finally, in the case of GSA Schedule and Army CHESS acquisitions, the screened savings findings were not found to be significantly different than the aggregate savings results. As seen in Table 6 (Comparison of ACC Acquisition Aggregate vs. Screened Savings, FY2007-2011), for the four years under review, the savings rates differed by just -1.71% (8.2% for the screened data vs. 9.9% for the aggregate results) for the GSA Schedule category. And in the case of Army CHESS acquisitions that were competed through reverse auctioning, the aggregate vs. the screened results differential was less than one percent (-.72%). This was similar to the results found for FY2011 alone, for as seen in Table 5 (Comparison of ACC Acquisition Aggregate vs. Screened Savings, FY2011), this year’s savings was only -.35%. There is one, final interesting
result in this regard, as for GSA Schedule acquisitions conducted in FY2011, the screened savings (at 8.3%) were actually better than the aggregate results (at 7.3%). In this instance, the elimination of buys with questionable target prices actually raised the ACC’s savings rates by using reverse auctioning on top of the GSA Schedule. The close tracking found between the screened and aggregate savings factors in the GSA Schedule and Army CHESS categories was predictable. Overall, finding only small negative – and even positive – variance in the savings rates when dealing with these contract vehicle classes simply reflects the more uniform target prices available for contract-based item categories than open market purchases, which rely on highly variable pricing sources.

CONCLUSION

In an era with massive budgetary and operational pressures, the ACC stands as an exemplar for how reverse auctioning can be strategically integrated into acquisition processes to produce significant procurement savings. The present research effort shows these “hard dollar” savings to be just that – very solid in the face of a robust screening technique that eliminated any acquisition action where there could be any question regarding the accuracy of the IGCE employed as the target price. In fact, the study produced the finding that the ACC achieved well-over $25 million in annual savings through reverse auction acquisitions in the most recent fiscal year. This translates into ACC acquisitions achieving a readily-defensible 11.5% savings rate in FY2011, and an overall four-year savings rate of ten percent (9.9%) on over $900 million in procurement spend competed through reverse auctioning between FY2007-2011.

This report presents a model for answering the first-level question regarding the use of reverse auctions – the significance of acquisition cost savings. Through the employment of this highly restrictive and conservative screening methodology on this large database of DoD acquisitions, the study has produced the most solid numbers generated to date on the level of “net savings” that can be expected through the use of reverse auctioning, irrespective of target price accuracy.
The value of the present study in further understanding the reverse auction savings proposition – both within the DoD and across the federal acquisition landscape – cannot be minimized. Mr. Bryon Young, the Executive Director of the Army Contracting Command – Aberdeen Proving Ground (ACC-APG), a major contracting center for the ACC, observed that: “The precise measurement of cost savings in a process like reverse auctioning is always hard to do. I believe we have achieved verifiable cost savings that have resulted in improved buying power for the Army. The Reverse Auctioning process clearly works to our benefit as a procuring activity.” Likewise, FedBid President Glenn Richardson commented that: “It is indeed significant to note the precision and validity of the cost savings that ACC has realized through the use of reverse auctions – and eliminate any questions related to the IGCE and target prices.”

A future study will look beyond these “first order” cost savings produced through the use of reverse auctioning at the “second order” efficiency savings generated for the ACC through the employment of FedBid.

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Endnotes


Reverse Auctioning – Producing Solid, Defensible Savings in Military Acquisition


SPECIAL NOTE: All photos included in this research brief are courtesy of the U.S. Army. From http://www.army.mil/search/images/.