

# Reverse Auction Purchasing

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**Office of Legislative Oversight Report 2018-4**

**REVERSE AUCTION PURCHASING**

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## Executive Summary

# REVERSE AUCTION PURCHASING

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OLO Report Number 2018-4

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The County Council directed the Office of Legislative Oversight (OLO) to prepare a report that describes the use of reverse auctions in public sector purchasing, identifies the benefits and drawbacks, and discusses potential future use by the Montgomery County Government.

### County Source Selection Methods

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The County Code establishes multiple methods for County Government purchases, also known as "source selection" methods. Three source selection methods are relevant to this report.

**Invitation for Bid:** An invitation for bid (IFB) is a solicitation in which the County Government invites vendors to submit sealed bids by a specified deadline. The County Government awards the contract to the responsible and responsive bidder that offers the lowest price.

**Request for Proposal:** A request for proposal (RFP) is a solicitation in which the County Government requests vendors to submit proposals that will be evaluated based on pre-determined criteria.

**Electricity Purchasing:** The County Government purchases electricity through a method called a "Request for Energy Proposals (RFEP)." As defined in the Procurement Regulations, an RFEP "is a solicitation for a proposal for the supply of electricity in which price, and quality, if deemed appropriate, is balanced to meet the electricity needs set forth in the solicitation."

### Reverse Auctions

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The term, "reverse auction," refers to a purchasing method in which vendors compete to sell goods or services to a buyer. In a reverse auction, the buyer identifies the goods and services to be purchased and potential sellers bid against one another to make the sale; this type of auction typically produces progressively lower prices.

**Process:** The reverse auction process is similar, in many ways, to more traditional procurement methods. As with other solicitations, the reverse auction process begins with the purchasing department issuing a solicitation document that describes the required specifications for the goods and services to be purchased, as well as the terms and conditions of the contract. Government purchasing departments commonly require pre-registration for vendors that are interested in participating in a reverse auction (similar to the pre-registration requirement for sealed bids).

In a reverse auction, registered vendors submit bids online. As the reverse auction progresses, bidders can view all bids in real time (with vendor names concealed), including the current low bid. Unlike most other solicitation methods, vendors participating in a reverse auction may submit multiple bids, adjusting their prices lower in response to their competitors' offers. The auction continues either for a pre-determined duration (for example, ten minutes) or until a designated amount of time passes since the last bid. When the bidding closes, the buyer completes the contract award using the same process used for traditional solicitations.

**Service Providers:** Reverse auctions are performed exclusively online, most commonly with a private sector service provider. The service provider hosts the reverse auction (often on a dedicated web page) and may offer other services such as vendor notification, distribution of solicitation documents, and vendor training. The most common forms of compensation are a flat fee paid by the seller or a fee set as a percentage of the transaction that is paid either by the seller or by the buyer.

## Executive Summary

### Feedback on Reverse Auctions

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Based on a review of academic research and interviews with public sector procurement officials, OLO offers the following six major findings from this report:

**1. State and local government procurement officers who have managed reverse auctions believe that reverse auctions can produce significant cost savings.**

State and local government procurement officers who managed reverse auctions attest that reverse auctions produced significant cost savings even when considering the offsetting costs associated with running a reverse auction.

**2. It is difficult to precisely calculate the direct effect of reverse auctions on contract price.**

OLO did not identify a single state or local government that could definitively determine the precise cost savings attributed to a reverse auction. Such a definitive determination would be extremely difficult to calculate as it would require a buyer to conduct nearly identical bid solicitations at nearly the same point in time – a practice that is rarely undertaken. Contract costs for most goods and services are subject to fluctuations based on changing market conditions such as product supply, transportation and labor costs, along with the number of potential sellers.

**3. Only certain types of goods and services are well suited for purchase via reverse auction.**

Reverse auctions are not appropriate for all types of purchasing, but are best suited for purchasing goods and services that are readily defined with precise and unambiguous specifications. In addition, reverse auctions have been found to work particularly well when purchasing items with minimal differences in product quality and which are sold by multiple vendors.

**4. Reverse auctions are not appropriate for small dollar value purchases in which the cost savings do not offset additional costs.**

Reverse auctions are not appropriate for small scale purchases. The dollar value for small purchases are unlikely to offset the service provider fees and the administrative and staff costs associated with executing a reverse auction.

**5. Pre-qualification of vendors is essential when using price as the final determinant for contract award.**

Government agencies that use reverse auctions universally pre-qualify vendors prior to the bidding stage. Government buyers establish minimum acceptable qualifications for bidders including those related to the vendor's credentials, experience, expertise, past performance, labor pool, equipment, and other standards. Vendors must demonstrate that they meet all the pre-qualification standards to be included in a short list of those invited to bid in the reverse auction.

**6. Government procurement officials interviewed by OLO do not believe that use of reverse auctions deters vendors from responding to solicitations.**

A common critique is that reverse auctions unfairly aid the buyer at the expense of the seller by lowering profit margins. Thus, vendors may opt out of solicitations offered through a reverse auction. However, none of the procurement officers interviewed by OLO reported that the use of reverse auctions altered the number or type of vendors that submitted bids.

## Executive Summary

### Past County Government Use of Reverse Auctions

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The County Government's sole use of reverse auctions has been for energy purchases.

**Electricity:** In 2006, the County Government participated in and served as the lead buyer for a group of 18 local governments that held a reverse auction for the purchase of electricity. After the contract expired, the County Government did not conduct another reverse auction for electricity. Instead, the County purchased electricity by means of bridge contracts based on prices negotiated by the State of Maryland and other jurisdictions.

**Natural Gas:** In 2007, Montgomery County joined a Metropolitan Washington Council of Governments (COG) cooperative purchasing reverse auction to acquire natural gas at a fixed price per therm for a 36-month time period. The contract produced by the reverse auction resulted in a greater than 50% reduction in the cost per therm. The County has not participated in another reverse auction for natural gas. Rather, the County Government currently purchases natural gas through a bridge contract with Fairfax Counts.

**Gasoline:** Over the past decade, the County Government has purchased gasoline through the COG Cooperative Purchasing Program. This cooperative purchase arrangement used reverse auctions in 2008 and 2010 to purchase gasoline. As the lead agency, the County Government established pricing for will-call and automatic delivery of four grades of gasoline. The County Government plans to continue to use reverse auctions for future gasoline purchases.

### Potential Use of Reverse Auctions by the County Government

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With the assistance of Office of Procurement staff, OLO identified three recent contracts that reasonably could have been bid through a reverse auction:

- **Department of Liquor Control (DLC) Paper Bags** – DLC entered into a contract for the purchase of paper bags used in retail stores. The solicitation specified the required dimensions and thickness for each of five bag sizes. Vendors submitted sealed bids for each bag size with an assumed purchase of 500,000 units of each size. Bid prices were to include delivery cost to a specified location within a specified time frame.
- **Recreation Department Apparel** – The Recreation Department entered into two contracts to purchase t-shirts and other apparel for athletic league participants and staff. Each contract included material, design, and fabric specifications for apparel in different sizes and styles. The Department issued both contracts under the Local Small Business Reserve Program.
- **Road Salt** - The County Government was the lead agency in a COG cooperative purchase of road deicing rock salt. The solicitation included a detailed description of the product specifications. Bidders offered per ton unit prices for rock salt (with and without delivery) for each of four geographic zones.

**Future Use:** The Department of General Services (DGS) is currently working to issue a request for proposal for a contract with a service provider to host reverse auction(s) for the future County Government and/or COG purchases of fuel. DGS intends for the contract to retain the service provider to conduct reverse auctions for commodities other than fuel.

## Executive Summary

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### OLO Recommendations

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Based on the above findings, OLO presents four recommendations to the County Council.

- 1. Request that the Executive Branch educate departmental contract and budget managers about the soon-to-be-available reverse auction provider services available for County Government purchases.**

Once the County Government awards the pending contract for a service provider to host future reverse auctions, the Executive Branch should inform contract managers and budget managers department about the potential for reverse auctions to produce cost savings for certain purchases and of the availability of the service provider to host a reverse auction.

- 2. Request the Executive Branch to proactively review upcoming solicitations to identify goods and services that are suitable for reverse auction bidding.**

Reverse auctions are best suited for purchasing goods and services sold by multiple vendors for products that have clearly defined specifications. Reverse auctions should be used only for contracts of sufficient dollar value to offset fees and administrative costs. The Executive Branch should review upcoming purchases to identify those that are suitable for reverse auction bidding.

- 3. Request that the Executive Branch pilot the use of reverse auctions for at least two procurements during the next 12 months.**

Following execution of the pending reverse auction service provider contract, the County Government should pilot the use of this bidding methodology. A pilot would allow for evaluation of several matters including: methods for assessing the effect of reverse auctions on contract price; administrative and staffing requirements; vendor pre-qualification procedures; services provided by the provider; and responses from the vendor community. The pilot should include a minimum of two solicitations (other than for fuel) during the upcoming 12 months.

- 4. Request that the Executive report to the Council in the Fall of 2018 on its efforts to: (a) educate departmental staff regarding reverse auctions; (b) identify goods and services that may be suitable for reverse auction bidding; and (c) pilot the use of reverse auctions.**

The Executive Branch should report to the Council in the Fall of 2018 on the topics addressed in the first three recommendations.

For full OLO report, go to

<https://www.montgomerycountymd.gov/OLO/Reports/CurrentOLOReports.html>

## CHAPTER 1. AUTHORITY, SCOPE, AND ORGANIZATION

### A. Authority

Council Resolution 18-223, FY 2016 Work Program for the Office of Legislative Oversight, adopted July 28, 2015.

### B. Scope, Purpose, and Methodology

A reverse auction is an auction in which sellers compete to sell to a buyer by lowering the price or amount they charge for goods and services. All levels of government are increasingly using reverse auctions when procuring goods or services. Proponents of the reverse auctions believe these auctions lower the overall costs of goods and services and allow procurement departments or offices to function more efficiently.

In the past, Montgomery County has participated in a small number of reverse auctions for electricity, gasoline, and natural gas. The Council asked OLO to look at the use of reverse auctions in Montgomery County and other jurisdictions to better understand the process, the benefits and drawbacks, and the future potential use of reverse auctions in Montgomery County.

OLO staffers Aron Trombka and Kristen Latham prepared this report with production assistance from Kelli Robinson. OLO conducted this study by compiling and analyzing information from a variety of sources including online literature, reviews of best practices, and interviews with procurement officials in other jurisdictions and representatives of reverse auction service providers.

### C. Organization of the Report

This report is organized into the following chapters:

**Chapter 2, Reverse Auction Background**, provides background on traditional procurement methods along with a detailed summary of reverse auctions;

**Chapter 3, Academic and Government Assessments of Reverse Auctions**, presents a literature review of the benefits and drawbacks of reverse auction in public procurement;

**Chapter 4, County Government Procurement**, outlines the County's procurement regulations, discusses the County's past use of reverse auctions, and identifies potential procurements for future reverse auctions;

**Chapter 5, Feedback and Case Studies from Other Jurisdictions**, summarizes the experiences and feedback from other jurisdictions and vendors who have used reverse auctions;

**Chapter 6, Findings and Recommendations**, presents OLO's findings and recommendations.

**D. Acknowledgements**

OLO received a high level of cooperation from Executive Branch staff, representatives of other jurisdictions, and other stakeholders. OLO appreciates the information and insights shared by:

Office of the County Executive	<i>Fariba Kassiri</i>
Office of the County Attorney	<i>Marc Hansen</i> <i>Scott Foncannon</i>
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Office of Procurement	<i>Cherri Branson</i> <i>Karen DeLuca</i> <i>Sarah Fornatora</i> <i>Eric Harris</i> <i>Pam Jones</i> <i>Penny Karakaya</i> <i>Renata Vasileva</i>
Representatives from Other Jurisdictions	<i>Janira Barroso, City of Philadelphia</i> <i>Lionel Hill, State of Maryland</i> <i>Allen Hunsberger and Melanie Caramat, San Diego County</i> <i>Scott Martin, Kentucky Association of Counties</i> <i>Tracey Neathery, City of Louisville</i>
Other Stakeholders	<i>Kris Colby, Former Employee FedBid</i> <i>Jon Harvey, EnerNoc</i> <i>Sherri Ledner, eBridge</i>

## CHAPTER 2: REVERSE AUCTION BACKGROUND

Government procurement, or public sector procurement, is the process of purchasing goods, services or construction on behalf of a public entity. This chapter provides background information on traditional government procurement methods as well as an introduction to one relatively new procurement method, reverse auctions.

- **Section A** describes traditional methods of procurement; and
- **Section B** provides information about reverse auctions as a procurement method.

### A. Traditional Methods of Procurement

Most government purchasing involves open competition governed by rules specific to certain dollar thresholds. Typically, the higher the value of a contract, the more formal and open the procurement, and the more likely that multiple factors will contribute to the award decision. The two most common methods for awarding a contract are a) the lowest price supplier or b) the most suitably qualified/best value. Government procurement methods are similar across public entities throughout the country, however, terminology may vary from jurisdiction to jurisdiction. In general, government purchasing is achieved using one of three types of methods:<sup>1</sup>

- **Small Purchases/No Competition** – procurements with a low dollar threshold that allows for direct purchases without an effort to conduct any competition (although they can include competition). The dollar threshold varies across jurisdictions and is usually based on balancing efficiency and the public’s expectations to get low prices through competition. Typically, these types of procurements fall between \$2,500 and \$25,000. Examples of small purchases include direct purchases or mini-contracts.
- **Informal or “3 Quotes” Competition** – procurements in which competition is required but follows relatively streamlined and informal procedures around how many potential providers are contacted (typically 3 quotes), how long to advertise/allow for bids or proposals, and whether to use other administrative procedures (i.e. providing a right to protest for bidders). These procurements do not usually require public notice or closed bids. Generally, thresholds for informal procurement can range from \$75,000 to \$250,000.
- **Full Formal Competition** – procurements for higher dollar value or more complicated goods/services. These procurements undergo full, formal competition for bidders including: published notice to the public about a contracting opportunity, adequate time to prepare bids or proposals (usually 14-30 days minimum), ability of potential suppliers to challenge the relevance and fairness of the advertised requirement or to protest a winning bid. Examples include invitations for bid (IFB) or requests for proposal (RFP).

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<sup>1</sup> The Institute for Public Procurement, *Guide for Elected and Senior Officials*, <http://engage.nigp.org/acton/attachment/24793/f-0134/1/-/-/-/-/Guide%20for%20Public%20Procurement%20Officials.pdf>

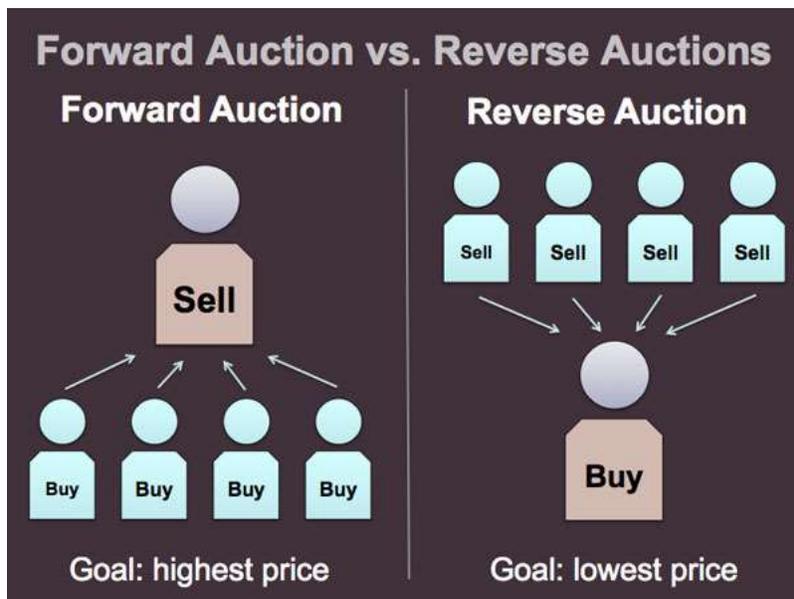
Government procurement rules may provide for exceptional circumstances and other factors that could affect which procurement method is employed. For example, the competition requirements for public procurement may be eliminated for emergency procurements or sole source contracts (a good or service with only one available vendor). Furthermore, many jurisdictions have implemented social policies that set up limits or set-asides for a certain class of contractors (such as veterans, minorities, women, or local small business).

Montgomery County’s methods of procurement will be discussed in greater detail in Chapter 4.

## B. Reverse Auctions

Reverse auctions are an alternative method for buyers to solicit bids from potential sellers. The use of reverse auctions for public sector procurement began in the early 2000s when internet-based technology became available to support the process.

The term, “reverse auction,” refers to a purchasing method in which vendors compete to sell goods or services to a buyer. In a traditional auction (also known as a “forward auction”), the seller offers goods and services and potential buyers bid against one another to make the purchase; this type of auction typically produces progressively higher prices. A reverse auction switches the roles of the buyer and the seller. In a reverse auction, the buyer identifies the goods and services to be purchased and potential sellers bid against one another to make the sale; this type of auction typically produces progressively lower prices.



Credit: Eric Hallstein.<sup>2</sup>

**Reverse Auction Process.** The reverse auction process is similar, in some ways, to a more traditional procurement methods such as an invitation for bid (also known as a “sealed bid”).

<sup>2</sup> <https://blog.nature.org/science/2014/08/06/birds-birdreturns-innovative-lands-conservation-science/>

As with other solicitations, the reverse auction process begins with the purchasing department issuing a solicitation document that describes the required specifications for the goods and services to be purchased, as well as the terms and conditions for award of the contract.

Government purchasing departments commonly require pre-registration for vendors that are interested in participating in a reverse auction (similar to the pre-registration requirement for sealed bids and other methods). Furthermore, vendors often must meet qualification criteria to bid for public sector contracts.

In a reverse auction, registered vendors are invited to submit bids online. As the reverse auction progresses, bidders can compare their most recent bid with the current low bid. Most commonly, the online reverse auction platform only shows bid amounts but conceals the names of the vendors submitting the bids. Unlike most other solicitation methods, vendors participating in a reverse auction may submit multiple bids, adjusting their prices lower in response to their competitors' offers. The auction continues either for a pre-determined duration (for example, ten minutes) or until a designated amount of time passes since the last bid.

When the bidding closes, the buyer completes the contract award using the same methods as traditional solicitations. If a contract is to be awarded based solely on price, then the responsible bidder with the lowest price at the end of the reverse auction would win the contract. If the contract is to be awarded based on price and other factors, the scoring for the contract would use the final price for each bidder at the close of the auction.

**Reverse Auction Service Providers.** Reverse auctions are performed exclusively online. Most commonly, state and local governments that engage in reverse auctions employ a private sector service provider to manage the process. The service provider hosts the reverse auction (often on a dedicated web page for state or local government) and may offer other services such as pre-auction notification to vendors, distribution of solicitation documents, vendor training, and analysis of event activity and results. OLO has identified no fewer than a dozen reverse auction service providers that currently serve public sector clients.

Different reverse auction service providers offer different pricing structures. Service providers may receive compensation either from the seller or from the buyer. The most common forms of compensation are a flat fee paid by the seller or a fee set as a percentage of the transaction that is paid either by the seller or by the buyer.

### General Services Administration

In 2013, the U.S. General Services Administration (GSA) launched a government-managed reverse auction platform ([www.reverseauctions.gsa.gov](http://www.reverseauctions.gsa.gov)) which enable governments at all levels to conduct reverse auctions through select Multiple Award Schedules (MAS) and establishes select blanket purchase agreements (BPAs) for commodities like office supplies or laptops, as well as for simple services like training and installation. Some reverse auction categories of goods/services available to federal government agencies include:

- Facilities Maintenance and Management;
- Furnishing and Floor Coverings;
- Food Service, Hospitality, Cleaning Equipment and Supplies, Chemicals and Services; and
- Office Products/Supplies and Services and New Products/Technology.

Through this platform, the award can be made to the apparent low bidder if it meets the solicitation's terms and conditions and is technically acceptable. The platform also allows for federal customers to set aside auctions for small business. The GSA collects an open market fee on all acquisitions.

State and local governments can also use the reverse auction bidding tool to access applicable GSA Federal Supply Schedule contracts under the authorities of the Cooperative Purchasing and Disaster Purchasing Programs:

- **Cooperative Purchasing Program** – state and local governments can purchase security and law enforcement equipment from pre-vetted industry partners. The CPP is limited to GSA Schedule 84 (Total Solutions for Law Enforcement, Security, Facilities Management, Fire, Rescue, Clothing, Marine Craft and Emergency/Disaster Response) and technology products from Schedule 70 (General Purpose Commercial Information Technology Equipment, Software, and Services).
- **Disaster Purchasing Program** – state and local governments are able to buy supplies and services directly from all GSA Schedules to facilitate recovery from major disaster or facilitate disaster preparation and response.

### CHAPTER 3: ACADEMIC AND GOVERNMENT ASSESSMENTS OF REVERSE AUCTIONS

Public sector agencies have almost two decades of experience using reverse auctions. This chapter identifies the benefits and drawbacks of public sector reverse auctions as determined by OLO's review of academic and government assessments of reverse auctions. The chapter is organized as follows:

- **Section A** discusses cost savings derived by reverse auctions;
- **Section B** outlines goods and services best suited for reverse auctions;
- **Section C** examines the effect of a contract's dollar value on reverse auctions;
- **Section D** reviews the role of price in reverse auctions;
- **Section E** summarizes the effect of reverse auctions on the vendor community; and
- **Section F** examines the fee structures used for reverse auctions.

#### A. Cost Savings

The most frequently cited reason for employing reverse auctions is to foster competitive bidding and thereby reduce purchasing costs. Multiple academic and government studies of reverse auctions have concluded that reverse auctions, under certain circumstances, can produce meaningful cost savings to public sector buyers. A 2011 study published in *International Journal of Managing Value and Supply Chains* by Professor David C. Wyld found that "the ability of reverse auctions to produce significant cost savings for buying organizations is considerable."<sup>1</sup> Wyld cites studies that determined that reverse auctions generally produce savings of between 10% and 40% compared to traditional procurement methods in which bidders submit a single, final price. The study further stated that reverse auctions "present a unique opportunity for the buyer to obtain lower prices from the suppliers than would otherwise be possible, and thus transfer profits from the supplier to the buyer."

In a 2015 memorandum to Federal agencies, the U.S. Office of Management and Budget's Office of Federal Procurement Policy (OFPP) described the benefits of reverse auctions and offered suggestions to maximize the value of their use. The OFPP memorandum states that "when properly used in combination with other source selection principles, reverse auctions can yield noteworthy savings."<sup>2</sup> The memorandum cites a General Accountability Office (GAO) report that studied the use of reverse auctions by five Federal agencies. The GAO reports that reverse auction purchasing yielded savings of approximately 12% for certain goods and services

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<sup>1</sup> Wyld, David C., *Current Research on Reverse Auctions: Part I - Understanding the Nature Of Reverse Auctions and the Price and Process Savings Associated with Competitive Bidding* in *International Journal of Managing Value and Supply Chains*, Vol. 2, No. 3, September 2011, <https://pdfs.semanticscholar.org/1fe1/8409aff5684cf4b649a44214ee4b82b4413c.pdf>.

<sup>2</sup> Rung, Anne E., Administrator, Executive Office of the President, Office of Management and Budget, Office of Federal Procurement Policy, Memorandum dated June 1, 2015, page 1, <https://obamawhitehouse.archives.gov/sites/default/files/omb/procurement/memo/effective-use-of-reverse-auctions.pdf>.

as compared to other procurement methods. OFPP attributes that cost savings to reverse auctions prompting greater price competition among bidders:

Reverse auctions offer the ability to conduct robust, real-time price competitions. They allow for multiple “rounds of bidding” for continued price reduction. This type of interactive bidding, when it occurs, strengthens competition.<sup>3</sup>

However, some analysts offer a contrary point of view and contend that reverse auctions may not produce cost savings. These analysts consider the transparency of the reverse auction process as a disincentive for vendors to offer their best price. As all bidders know their competitors’ latest bids, no bidder needs to offer its best price. This argument was outlined in an opinion piece published in the journal, *Government Executive*:

Reverse auctions do not guarantee the lowest price for a contract. Rather, like in “The Price is Right” game show, they guarantee that one business will underbid others by just one dollar. A bidder has no incentive to offer its best price and may never have to offer its lowest price. Nevertheless, businesses do offer their best price for low price technically acceptable procurements and other contracting approaches conducted through sealed bids, where competitors do not know their competitor’s price.<sup>4</sup>

## **B. Goods and Services Best Suited for Purchase via Reverse Auction**

Nearly all studies and assessments of reverse auctions conclude that this bidding methodology is not appropriate for all types of purchasing. Most notably, academic and other studies note that reverse auctions are most well-suited for purchasing goods and services that are readily defined with precise, unambiguous specifications. The U.S. General Services Administration characterizes the reverse auction procurement method as “an efficient and cost-effective process for buying non-complex commodities and simple services. (emphasis added).”<sup>5</sup> Similarly, in a report published by the IBM Center for the Business of Government, Wyld states:

The reverse auction acquisition tool is not appropriate for all spending categories. In fact, there are “sweet spots” for the use of reverse auctioning, namely in the areas of commodity-type buys of goods and services and in goods that are readily specifiable.<sup>6</sup>

Reverse auctions have been found to work particularly well when purchasing items with well-defined specifications and minimal differences in product quality and which are sold by multiple vendors. Wyld expands on this concept in an academic article:

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<sup>3</sup> Ibid.

<sup>4</sup> Christianson, Jimmy, *Viewpoint: Reverse Auctions Don’t Help Agencies or Taxpayers* in *Government Executive*, December 30, 2015, <https://pdfs.semanticscholar.org/1fe1/8409aff5684cf4b649a44214ee4b82b4413c.pdf>.

<sup>5</sup> U.S. General Services Administration Website Reverse Auctions Frequently Asked Questions, September 16, 2017, <https://reverseauctions.gsa.gov/html/faq.html>.

<sup>6</sup> Wyld, David C., *Reverse Auctioning: Saving Money and Increasing Transparency*, IBM Center for the Business of Government, page 11, 2011, <http://www.businessofgovernment.org/sites/default/files/Reverse%20Auctioning.pdf>.

Reverse auctions have been found to be appropriate for “low complexity” items, which entails products and services that are easily understood by both buyers and suppliers and thus there can be easy comparison made between the offerings of competing vendors, as well as bulk items and goods that are manufactured based upon an agreed upon standard. ... Overall, procurement research has shown that if a good or service can be properly specified, it can be successfully procured through competitive bidding. In this regard, “specifiability” – defined as the ability to provide a thorough and unambiguous description of all the requirements of a good or service being procured – has been characterized as *the* most important criterion for determining if a reverse auction was appropriate for a particular procurement.<sup>7</sup>

### C. Contract Dollar Amounts

The dollar amount of a contract often influences the procurement method used. As detailed in Chapter 4, County procurement regulations specify minimum and maximum dollar thresholds for different source selection methods. Similarly, the dollar amount of a purchase may affect the suitability of using a reverse auction.

Several academic and governmental assessments have concluded that reverse auctions work best when used to make relatively large purchases. As stated by Wyld, “there are strong reasons - both for the interests of both the buying organization and for the interested suppliers to have reverse auctions involving higher volume transactions (both in terms of units and total price).”<sup>8</sup> From the buyer’s perspective, the fixed administrative costs and expenditures of staff time needed to run a reverse auction are more likely to be offset when the contract dollar amount is large. Similarly, from the seller’s point of view, a high-volume sale can offset the low margins often produced by reverse auctions. A study published in the Journal of Public Procurement reinforces this concept:

In order to compensate for lower prices and lower margins, suppliers seek higher volumes to maintain or increase the total revenue. Buyers, in turn, benefit from the lower transaction costs and economies of scale that result from larger volumes. ... Numerous studies have indicated that the procurement volume must be sufficiently high to provide sufficient profits to attract enough suppliers, and provide buyers with enough savings to cover their additional costs.<sup>9</sup>

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<sup>7</sup> Wyld, David C., *Current Research on Reverse Auctions: Part II - Implementation Issues Associated with Putting Competitive Bidding to Work* in International Journal of Managing Value and Supply Chains, Vol. 2, No. 4, December 2011, <https://pdfs.semanticscholar.org/0cbc/41f8c1cabddc1561f2b80fb2e155152c5b1a.pdf>.

<sup>8</sup> Supra, Wyld, *Current Research on Reverse Auctions: Part II*.

<sup>9</sup> Shalev, Moshe E., and Asbjornsen, Stee, *Electronic Reverse Auctions and The Public Sector: Factors of Success* in Journal of Public Procurement, vol. 10, issue 3, Fall 2010, [http://pracademics.com/attachments/article/113/Article%205\\_Shalev.pdf](http://pracademics.com/attachments/article/113/Article%205_Shalev.pdf).

## D. The Role of Price in Contract Awards

A reverse auction is a bidding mechanism that places the primary focus on price as opposed to other criteria such as product design or vendor experience. Analysts have examined how this emphasis on price affects the use of reverse auctions.

Studies of alternative procurement methods have identified reverse auctions as most appropriate for purchases in which price can be the final determinant for contract award. For example, in most cases, the invitation for bid (IFB) method relies primarily on bid prices to determine which qualified vendor will receive a contract award. The OFPP memorandum elaborates on this point:

Reverse auctions are not a one-size-fits-all tool. Reverse auctions are likely to be most effective in a highly competitive marketplace when requirements are steady and relatively simple and might otherwise be acquired using either a sealed bid or achieving best value through “low price technically acceptable” source selection criteria, and result in fixed price agreements.<sup>10</sup>

Some analysts warn, however, of the need to mitigate price as the prevailing factor in contract awards. They argue that reverse auctions may overly elevate the importance of price as compared to other factors, such as vendor qualifications, experience, and past performance. In an opinion piece published in the *Journal of Contract Management*, Robert E. Lloyd contends that consideration of contractor performance and experience must now be overshadowed by price. Mr. Lloyd writes that:

Evaluation of contractor past performance remains a key facet of source selection, and caution abounds concerning the hazard of letting price overshadow other factors.<sup>11</sup>

Furthermore, some suggest that the emphasis on price in reverse auctions may damage the relationship between buyers and sellers. This, in turn, could produce a disincentive for vendors to customize their products to best meet the buyer’s needs. The *Journal of Public Procurement* study (referring to electronic reverse auctions as “e-RAs”) highlights this concern:

e-RAs, when conducted in their most basic form, restrict suppliers to compete on price alone. This threatened to damage longstanding supplier relationships and lead to reduced supplier innovation and quality, as anything above the minimum specifications was not rewarded by simple e-RA designs. By ignoring past supplier performance and loyalty, the introduction of e-RAs caused alarm among incumbent suppliers, leading some to refuse to participate in e-RA-based procurement exercises.<sup>12</sup>

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<sup>10</sup> Supra, Rung.

<sup>11</sup> Lloyd, Robert E., *Low Bid Tyranny, Past Performance, and Reverse Auctions* in *Journal of Contract Management*, Summer 2013, <https://www.ncmahq.org/docs/default-source/default-document-library/articles/ncma---jcm13---7-15>.

<sup>12</sup> Supra, Shalev and Asbjornsen.

## E. Effect on the Vendor Community

In the literature review conducted by OLO, the single greatest concern regarding reverse auctions related to the effect this source selection method has on the community of vendors that supply goods and services to buyers. A common critique is that reverse auctions unfairly aid the buyer at the expense of the seller. According to this approach, the heightened competition and reduced margins produced by reverse auctions negatively affect the vendor community. Thus, vendors may elect to opt out of solicitations offered through a reverse auction. In a 2012 commentary published in the *Journal of Contract Management*, Jacob Ruytenbeek states:

Reverse auctions are designed to take from the supplier and give to the buyer. With each successive bid in a reverse auction, bidders lose and buyers win. In short, the supplier's loss is the buyer's gain. In fact, the competitive pressure can be so great that it sometimes leads to suppliers bidding below cost.

Suppliers understand that reverse auctions are bad for business and are beginning to take steps to avoid them. A procurement strategy that is built around reverse auctions is unsustainable and is therefore bound to fail. The success of any sustainable procurement strategy cannot rest on the buyer's outcomes alone, but instead must rest on the outcomes of both parties.<sup>13</sup>

Unlike a sealed bid procurement, a reverse auction allows vendors to view the progression of bids while the auction is in progress. The transparency of this process provides vendors with insights into the pricing strategies of their competitors. Wyld suggests this aspect of reverse auctions may deter some vendors from participating:

Full visibility auctions may not draw the highest level of competition due to the fact that even bidding in an anonymous fashion, some suppliers may be unwilling to participate out of fear of revealing pricing intelligence to their rivals.<sup>14</sup>

Nonetheless, many analysts consider vendor dissatisfaction with reverse auctions as a temporary condition that stems from unfamiliarity with a relatively new source selection method. From this perspective, vendors will become more comfortable with reverse auctions as the method becomes more common. Moreover, several analysts suggest that buyers actively seek input from the vendor community as to how to best refine the reverse auction process to respond to their concerns and needs. As stated in the memorandum from the OFPP:

Vendor feedback may be particularly helpful as agencies build experience and work to generate robust competition. Accordingly, agencies are encouraged to elicit feedback from auction participants, including experiences with a third-party contractor, if one was used to facilitate the competition.<sup>15</sup>

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<sup>13</sup> Ruytenbeek, Jacob, *Reverse Auctions: Turning Winners into Losers* in *Journal of Contract Management*, October 2012, <https://www.ncmahq.org/docs/default-source/default-document-library/M/Articles/CM1012---40-45.pdf>

<sup>14</sup> Supra, Wyld, *Current Research on Reverse Auctions: Part II*.

<sup>15</sup> Supra, Rung.

## **F. Fee Structure**

As mentioned in Chapter 2, multiple models exist to compensate private sector reverse auction service providers. The most common forms of compensation are a flat fee paid by the seller or a fee set as a percentage of the transaction to be paid either by the seller or by the buyer. Fees paid to reverse auction service providers cut into the savings produced by this bidding methodology. The greatest attribute of reverse auctions – driving down prices – would be negated if the cost of fees exceeds the contract cost savings produced. The OFPP memorandum notes the need to negotiate a proper reverse auction fee:

Fees should be considered in evaluating whether the price of the product or service (including any additional fees for use of another agency’s existing contract) is fair and reasonable. Anticipated cost savings should be taken into account in determining the reasonableness of the fee.<sup>16</sup>

The reverse auction fee structure could also affect the vendor community. Some analysts warn that imposing the fee on vendors could discourage participation in reverse auctions. The OFPP memorandum also comments on this concern:

In order to maximize competition and small business participation, agencies are encouraged to cover the costs of vendor participation and avoid fee arrangements where vendors must pay to participate in the agency’s reverse auction.<sup>17</sup>

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<sup>16</sup> Ibid.

<sup>17</sup> Ibid.

## CHAPTER 4: COUNTY GOVERNMENT PROCUREMENT

The County Charter, County Code, and Code of County Regulations provide the legal framework for County Government procurement policies, rules, and procedures. County procurement laws apply to every County Government purchase of goods, services, or construction with a few exceptions specified in County Code. Of note for this report, one of the exceptions is for the “buying electricity, natural gas, and compressed natural gas, under Executive Regulation.”<sup>1</sup> The rules governing the County Government’s purchase of electricity, natural gas, and compressed natural gas are found in the Procurement Regulations.<sup>2</sup>

This chapter describes the rules governing County Government procurement practices in general and provides details about past County Government purchases that resulted from use of reverse auction bidding. The chapter includes the following six sections:

- **Section A** summarizes the County’s methods of source selection;
- **Section B** discusses additional County procurement policies;
- **Section C** outlines the roles and responsibilities of the Office of Procurement, Office of County Attorney, and Using Departments;
- **Section D** examines the County Government’s past use of reverse auctions;
- **Section E** identifies County opportunities to potentially use reverse auctions; and
- **Section F** summarizes the use of reverse auctions in other County agencies.

### A. Methods of Source Selection

The County Code and Procurement Regulations establish multiple methods for County Government purchases, referred to in the law as “source selection” methods.<sup>3</sup> In most cases, source selection methods involve competition in which the County Government solicits goods, services, or construction from more than one source; less frequently, the County may engage in non-competitive purchasing.<sup>4</sup> The Procurement Regulations specify when certain procurement methods must be used, along with what procedures are required for each method and how to evaluate bidders/offerors. The table on the following two pages summarizes the source selection methods permitted by the County Code and Procurement Regulations.

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<sup>1</sup> Montgomery County Code § 11B-4(a)(6).

<sup>2</sup> Code of Montgomery County Regulations § 11B.00.01.04.01

<sup>3</sup> Montgomery County Code §§ 11B-9 to 11B-16; Code of Montgomery County Regulations § 11B.00.01.1.04.

<sup>4</sup> Code of Montgomery County Regulations § 11B.00.01.04.1.12

**Overview of Montgomery County Source Selection Methods**

<b>Source Selection Method</b>	<b>Dollar Threshold Requirements</b>	<b>Description</b>
Petty Cash	\$100 or less	Petty cash is used for informal purchases of goods or services by employees and authorized by a Using Department Head.
Direct Purchase	\$10,000 or less	An informal procurement of goods, services, or construction under the direct authority of the Using Department Head.
Mini-Contract	Above \$10,000 and Below \$100,000	A mini-contract is used to obtain professional services (and non-professional services under special circumstances) via an informal solicitation process.
Small Purchase	Above \$10,000 and Below \$100,000	A small purchase is an informal solicitation for goods, construction or services initiated by a Using Department. The County must contact at least five randomly selected potential offerors and at least one of the potential offerors should be a minority owned business. Contract award must be based on price, responsiveness and responsibility.
Competitive Sealed Bidding – Invitation for Bid (IFB)	\$100,000 or more	IFBs request bids from vendors for construction, goods and non-professional services to provide an item or service identified in the IFB. IFBs must include specifications for items being purchased, criteria to evaluate bids, and all contractual provisions applicable to the purchase. Contract award must be made to the lowest responsible and responsive bidder.
Competitive Sealed Proposals – Request for Proposals (RFP)	\$100,000 or more	RFPs request proposals from vendors to provide the County a specific service identified in the RFP. The RFP process considers both quality and price to obtain the best value for the County. RFPs must contain factors for evaluation of the proposal and an explanation of the ranking of vendors. Evaluation factors must include factors related to the technical quality of the proposal or the ability of the vendor, or both, and includes price. At least 10% of the total points for all evaluation criteria must be assigned to price.
Abbreviated Formal Solicitation	\$200,000 or less	A method for obtaining competitive sealed bids or competitive sealed proposals by using an abbreviated formal solicitation process, when determined by the Director of the Office of Procurement to be in the best interest of the County.

## Overview of Montgomery County Source Selection Methods (Continued)

Source Selection Method	Dollar Threshold Requirements	Description
Bridge Contract	No specific limit	A bridge contract is a procurement for goods, services, or construction using an existing competitive contract with another public entity when the Procurement Director determines that a bridge contract is in the best interests of the County. The contract must be for the same goods, services, or construction provided to the other public entity at the same prices being charged to the other public entity.
Open Solicitation	No specific limit	Under an open solicitation, the County accepts applications for a contract on a continuing basis and awards a contract to each applicant who meets pre-established qualifications.
Public Entity Procurement	No specific limit	A public entity procurement is an agreement to acquire or use goods, services, or construction with a public entity upon terms and conditions considered to be in the best interest of the County. A public entity procurement does not require public solicitation, nor does it require justification as a non-competitive procurement.
Non-Competitive Contract	No specific limit	The County may award a contract without competition if the CAO determines that award serves a public purpose and: <ol style="list-style-type: none"> <li>1. Only one source exists that can meet County needs for the required goods, service, or construction (“sole source”);</li> <li>2. The good or service required is in connection with potential or pending litigation, condemnation, or collective bargaining;</li> <li>3. A proposed contractor or subcontractor has been specifically identified in a grant accepted by the County (“named in grant”); or</li> <li>4. A proposed contractor has been identified in a grant or appropriation resolution approved by the Council (“community grant”).</li> </ol>
Emergency Procurement	No specific limit	An emergency procurement is an informal procurement of goods, services, or construction necessitated by a threatened dangerous condition or a threatened imminent or unforeseen curtailment of an essential service or supply that will endanger or damage health, life or property and cannot be remedied through a normal procurement.

The two source selection methods selection most relevant to a discussion of reverse auctions are invitation for bid and request for proposal. In addition, a specialized process for electricity purchasing represents a third County procurement method that is germane to this report.

## 1. Invitation for Bid

An invitation for bid (IFB) is a solicitation method in which the County Government invites vendors to submit sealed bids by a specified deadline. Bids must be opened publicly at a time and place designated in the IFB.<sup>5</sup> The Procurement Regulations specify that an IFB “is used for procurements valued at \$100,000 or more.”<sup>6</sup>

An IFB solicitation is a competitive process in which the County Government awards the contract to the responsible and responsive bidder that offers the lowest price.<sup>7</sup> The County Code defines a “responsible bidder” as a vendor “who has the capability in all respects to perform fully the contract requirements, and the integrity and reliability which will help assure good faith performance;” and a “responsive bidder” as a vendor who has submitted a bid which conforms in all material respects to the invitation for bids.<sup>8</sup>

As stipulated in the County Code, an IFB must include specifications, evaluation criteria, and all contractual provisions applicable to the procurement.<sup>9</sup> The Procurement Regulations mandate that an IFB include specifications with “sufficient specificity and detail to permit full and free competition and direct incorporation into a contract document without need for further change or amendment.”<sup>10</sup> In addition, an IFB may include criteria to determine the acceptability of a bid “such as inspection, testing, quality, workmanship, delivery, and suitability for a particular purpose.”<sup>11</sup> The Procurement Regulations indicate that an IFB is best suited for procurement of goods or services with clearly defined specifications including the purchase of construction services, goods, or non-professional services.<sup>12</sup> Bids must be evaluated based on the criteria set forth in the IFB. The County Code requires that all IFB criteria “be objectively measurable.”<sup>13</sup>

## 2. Request for Proposal

A request for proposal (RFP) is a solicitation method in which the County Government requests vendors to submit proposals that will be evaluated based on criteria set forth in the solicitation document. Vendors submit competitive sealed proposals for evaluation. The result of the evaluation is to determine which proposals would “obtain the best value for the County.”<sup>14</sup>

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<sup>5</sup> Montgomery County Code § 11B-9(d).

<sup>6</sup> Code of Montgomery County Regulations, § 11B.00.0104.01.1.2.

<sup>7</sup> Code of Montgomery County Regulations, § 11B.00.01.04.01.1.1.

<sup>8</sup> Montgomery County Code § 11B-1.

<sup>9</sup> Montgomery County Code § 11B-9(b).

<sup>10</sup> Code of Montgomery County Regulations, § 11B.00.01.04.01.1.3(e).

<sup>11</sup> Montgomery County Code § 11B-9(e)(2)(A).

<sup>12</sup> Code of Montgomery County Regulations, § 11B.00.01.04.01.1.2. The Procurement Regulations further state that an IFB may be used for professional services if the Procurement Director determines that “specifications are defined in sufficient detail to allow a contract award without further need to clarify the scope of work; and the ability of the offeror may be established through criteria such as years of experience, licenses held, degrees awarded, or other objectively measurable criteria.”

<sup>13</sup> Montgomery County Code § 11B-9(e)(2)(B).

<sup>14</sup> Code of Montgomery County Regulations, § 11B.00.01.02.4.83.

The regulations authorize use of an RFP “when (1) a Using Department can generally formulate the scope of work or specifications for the services or system to be acquired; (2) there are known sources of supply; (3) competition is anticipated; and (4) the procurement is valued at \$100,000 or more.”<sup>15</sup> As detailed in the Procurement Regulations, the RFP method is intended for use in the procurement of professional services.<sup>16</sup> An RFP may be used for the procurement of construction, goods, or nonprofessional services “when the County determines that the use of evaluation criteria authorized for use in an RFP would promote the best interests of the County.”<sup>17</sup>

An RFP must specify the evaluation criteria that will be used for scoring proposals and must explain how vendor rankings will be determined. Evaluation criteria must include factors related to the technical quality of the proposal and/or the ability of the vendor to fulfill the terms of the proposal.<sup>18</sup> The evaluation criteria must include cost factors. The Procurement Regulations mandate that a minimum of 10 percent of total evaluation points be assigned to the cost factor. In addition, the RFP selection process may require each vendor that meets a pre-established score to compete for the contract award based on price alone.<sup>19</sup>

### 3. Electricity Purchasing

As noted above, the County Code and Procurement Regulations provide a distinct set of rules governing the procurement of electricity (as well as natural gas and compressed natural gas). The County Government purchases electricity through a source selection method called a “Request for Energy Proposals (RFEP).” As defined in the Procurement Regulations, an RFEP “is a solicitation for a proposal for the supply of electricity in which price, and quality, if deemed appropriate, is balanced to meet the electricity needs set forth in the solicitation.”<sup>20</sup> An RFEP is intended for the purchase of electricity when “cost and, if appropriate, technical and administrative considerations are valid criteria in the evaluation.”<sup>21</sup>

An RFEP must include an explanation of the method of contract award. As stipulated in the Procurement Regulations, an electricity contract may be awarded based on any or all of the following criteria:

- Price alone, in the aggregate, by group, or by unit price;
- Price and quality of service factors as deemed appropriate; or
- Price including, if appropriate, total overall cost or savings to the agencies.<sup>22</sup>

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<sup>15</sup> Code of Montgomery County Regulations, § 11B.00.01.04.1.2.2(b).

<sup>16</sup> Code of Montgomery County Regulations, § 11B.00.01.04.1.2.2(a).

<sup>17</sup> Code of Montgomery County Regulations, § 11B.00.01.04.1.2.2(d).

<sup>18</sup> Montgomery County Code § 11B-10(d).

<sup>19</sup> Code of Montgomery County Regulations, § 11B.00.01.04.1.2.3(e)(6).

<sup>20</sup> Code of Montgomery County Regulations, § 11B.04.01.04.1.1.

<sup>21</sup> Code of Montgomery County Regulations, § 11B.04.01.04.1.2.

<sup>22</sup> Code of Montgomery County Regulations, § 11B.04.01.04.1.3.1.

The RFEP process does not include a public opening of proposals.<sup>23</sup> A selection committee appointed by the Procurement Director evaluates each proposal based on pre-determined criteria. Evaluation criteria may include factors such as the vendor's experience and technical competence, past performance on other County contracts, experience on similar contracts, and capacity to supply the proposed goods and services in the required time.<sup>24</sup> Following review of the proposals, the selection committee develops a short list of vendors that are eligible for a contract award.<sup>25</sup> Next, short listed vendor proposals are evaluated based on total overall electricity costs or savings. The terms of a contract agreement, including cost and supply provisions, are subject to negotiation. Following negotiations, the Office of Procurement may award a contract to "the responsible vendor(s) whose proposal(s) are most advantageous to the participants."<sup>26</sup>

## B. Additional County Procurement Policies

The County Code sets out additional procurement and contracting requirements to implement certain County policies. These requirements include:

- **Wage Requirement:** The County Wage Requirement law requires that contractors and subcontractors pay employees an hourly wage rate at or above an annually adjusted minimum rate.<sup>27</sup> The Chief Administrative Officer adjusts the rate annually based on changes in the Consumer Price Index for all urban consumers in the Washington-Baltimore metropolitan area, as published by Bureau of Labor Statistics. The law exempts certain contractors and certain types of contracts from this requirement, including nonprofit organizations, public entity contracts, emergency contracts, bridge contracts and non-competitive contracts. The law gives the County the ability to withhold contractor payments if a violation of the law is found, and imposes reporting requirements to ensure compliance. Effective July 1, 2017, the Wage Requirement is set at \$14.55 per hour through June 30, 2018.
- **Minority-Owned Businesses:** The County Code establishes a minority owned business purchasing program intended to remedy the effects of discrimination on minority-owned businesses.<sup>28</sup> Minority-owned businesses are defined as those that are at least 51% owned and managed by minority persons, including African American, Hispanic American, Asian American, Native American, Persons with Disabilities, and women. Through this program, the County Government actively recruits minority-owned businesses to provide goods, construction and services. In addition, for negotiated contracts valued at or above \$50,000, this program obligates non-minority prime contractors to demonstrate an effort to award an established percentage of the contract value to minority-owned subcontractors. The current minority-owned business goals are 21% of total value for construction contracts; 15% for

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<sup>23</sup> Code of Montgomery County Regulations, § 11B.04.01.04.1.4(d).

<sup>24</sup> Code of Montgomery County Regulations, § 11B.04.01.04.1.2.3(e)(5).

<sup>25</sup> Code of Montgomery County Regulations, § 11B.04.01.04.1.

<sup>26</sup> Code of Montgomery County Regulations, § 11B.04.01.07.4(b).

<sup>27</sup> Montgomery County Code § 11B-33A.

<sup>28</sup> Montgomery County Code § 11B-57 to 11B-64.

professional services contracts; 22% for non-professional services contracts; and 15% for the purchase of goods.

- **Local Small Business Reserve:** The Local Small Business Reserve Program (LSBRP) is intended to allow local, small vendors an opportunity to compete for County Government contracts. As stipulated in the County Code, the program requires County Government departments to award at least 20 percent (with specified exceptions) of their procurements to local small businesses.<sup>29</sup> The LSBRP law directs the Executive Branch to establish regulations specifying the criteria, size requirements, and gross sales amounts to qualify as a local small business. The law further mandates that the Executive Branch maintain a comprehensive list of qualified local small businesses and identify outreach and marketing strategies to inform local small businesses of the opportunity to compete for County Government contracts.
- **Recycled Materials:** The County Code mandates that County Government departments review the specification of contract solicitations to require use of goods containing recycled materials and/or provide a price preference of up to 10 percent for products containing recycled materials.<sup>30</sup> The Code charges the Office of Procurement with the responsibility to shape contract specifications to ensure compliance with the recycled materials requirement. The Code specifies that the County Government should structure procurement solicitations to achieve the goal that the dollar value of recycled paper product purchases be at least 50% of the total dollar value of paper products purchased.

### C. Departmental Procurement Responsibilities

The County Code charges the Office of Procurement to administer the centralized purchasing system.<sup>31</sup> The Code further authorizes the Office of Procurement to procure all goods and services in accordance with Chapter 11B and other applicable laws and to perform other related functions assigned by the Chief Administrative Office.

The Procurement Regulations charge the Office of the County Attorney with the responsibility to review contract actions for legality and conformance with relevant regulations.<sup>32</sup>

County Government departments (referred in the Procurement Regulations as “Using Departments”) are responsible for writing the specifications for goods and services to be purchased “in such a manner as to encourage competition and to avoid limitation of competition, balanced with the need to serve the public interest.”<sup>33</sup> In addition, the Procurement Regulations require that a Using Department conduct a price analysis to determine that prices in a pending contract are “fair and reasonable.”<sup>34</sup>

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<sup>29</sup> Montgomery County Code § 11B-66.

<sup>30</sup> Montgomery County Code § 11B-56.

<sup>31</sup> Montgomery County Code § 2-64N.

<sup>32</sup> Code of Montgomery County Regulations, § 11B.00.01.01.1.3.

<sup>33</sup> Code of Montgomery County Regulations, § 11B.00.01.05.2.

<sup>34</sup> Code of Montgomery County Regulations, § 11B.00.01.10.1.

## **D. Past County Government Use of Reverse Auctions**

The Montgomery County Government has limited experience with reverse auctions. As detailed below, the County Government's sole use of reverse auctions has occurred for the purchase of energy supplies.

### **1. Electricity**

Electricity in Maryland was deregulated in the early 2000s and, as a result, the electricity market opened for different methods of electricity purchasing, including for state and local jurisdictions. In 2006, the Montgomery County Government served as the lead buyer for a group of 18 local governments (including Prince George's County, Fairfax County, City of Gaithersburg, and the City of Rockville) that held a reverse auction for the purchase of electricity.

The County contracted with World Energy Exchange to assist with and conduct the reverse auction. Over a two-day span, the group held auctions for 68 account groupings (each lasting five minutes) and received 292 bids. The auctions resulted in over \$125 million in contract awards, with terms ranging from 12 to 36 months and including some renewable green energy contracts.

After the contract expired, the County Government did not conduct another reverse auction for electricity. Instead, the County purchased electricity by means of bridge contracts based on prices negotiated by the State of Maryland and other jurisdictions. County Department of General Services (DGS) staff report that the current electricity market allows for unbundling of delivery from other contract elements (such as renewable sources), and, as a result, many jurisdictions (including the County) currently procure electricity through unbundled wholesale block purchases.

### **2. Natural Gas**

In 2007, Montgomery County joined a Metropolitan Washington Council of Governments (COG) cooperative purchasing agreement that used a reverse auction to acquire natural gas for a 36-month time period. The District of Columbia Government was a lead agency for the purchase and worked in conjunction with COG's Cooperative Purchasing Program. The cooperative group consisted of 24 public agencies, including a majority of COG member jurisdictions and other governmental entities such as the Montgomery County Public Schools (MCPS). DGS staff report that one of the major benefits of this purchase was that it put most of the Montgomery County agencies/departments who purchase natural gas on the same purchasing schedule.

COG selected a firm called Co-EXprise as the reverse auction service provider for a fixed price per therm reverse auction. The County Government purchased natural gas for its fleet management operations through the auction. In a CountyStat report, DGS reported that during the previous contract term, the Division of Fleet Management Services (DFMS) paid an average of \$0.3225 per therm for natural gas. Under the contract procured through the COG reverse auction, DGS purchased natural gas at a rate of \$0.1530 per therm, a savings of \$0.1695 per

therm (or 53%). The price reduction produced savings of \$317,638 for natural gas purchases from December 1, 2007 through November 30, 2008.

DGS staff report that the County has not participated in another reverse auction for natural gas since 2007. Rather, the County Government currently purchases natural gas through a bridge with a Fairfax County contract with favorable pricing.

### **3. Gasoline**

Over the past decade, Montgomery County Government has purchased gasoline through the COG Cooperative Purchasing Program. This cooperative purchase arrangement used reverse auctions in 2008 and 2010 to purchase gasoline. Most recently, a cooperative purchase reverse auction for gasoline was conducted in 2014 using a service provider called eBridge. The Montgomery County Government served as the lead agency for the more than 20 participating jurisdictions.

The County Government established pricing for will-call and automatic delivery of regular unleaded, mid-grade unleaded, premium unleaded gasoline and E85 (ethanol fuel blend) with three alternative delivery options. The auction attracted bids from eight suppliers. eBridge reports that “The best measurement of success was the close competition among the suppliers. On certain line items, the spread between first and second place was a mere 0.01 which indicates that true market value has been achieved, and in this case, multiple suppliers were the lowest priced for different geographic zones and/or fuel types.” The County Government plans to continue to use reverse auctions for gasoline purchases for the foreseeable future.

## **E. County Government Reverse Auction Opportunities**

This section discusses past County Government purchases that may have been suitable for reverse auction bidding as well as an on-going initiative by the County Government that could result in greater future use of reverse auctions.

### **1. Potential Past Use**

For this report, OLO sought to identify recent County Government contracts that may have resulted in lower costs had the solicitation included reverse auction bidding. In identifying these contracts, OLO relied on criteria related to the suitability of using reverse auction bidding which was cited in the literature and by procurement officials in other jurisdictions. Specifically, OLO reviewed IFB solicitations issued within the past year and selected those with an expected contract value of more than \$100,000 and for goods/commodities with clearly defined specifications. Through this exercise, OLO identified the following ten contracts:

<b>Contract Number</b>	<b>Description</b>
1051675	Apparel for Recreation Dept. Leagues (LSBRP)
1039720	Apparel for Recreation Dept. Staff (LSBRP)
1070056	Environmentally and Pet Friendly Ice Melt
1051499	Premixed Concrete
1064045	Hot Mix Asphalt
1067664	Stone, Rip Rap, Backfill
1055062	Tree Maintenance and Removal
1051500	Street and Lot Sweeping
1050060	Paper Bags for Dept. of Liquor Control
1051452	Disposable Medical Supplies

OLO interviewed Office of Procurement staff about the procurement of these contracts to discuss whether use of reverse auction bidding would have been suitable. Based on the interviews, OLO concluded that many of the solicitations lacked the characteristics of successful reverse auction contracting (see Chapter 3):

- The ice melt solicitation lacked a clear and unambiguous definition of the term, “environmentally and pet friendly”;
- Two of the solicitations (hot mix asphalt and stone/rip rap/backfill) had geographic limitations that often limited interest to a single vendor;
- Three solicitations (premixed concrete, disposable medical supplies, and street/lot sweeping) only had only one responsive bidder; and
- The tree maintenance solicitation was susceptible to unbalanced bidding requiring further price negotiations.

However, OLO identified the following two solicitations that meet the preferred criteria for reverse auction bidding – multiple bidders, clear specifications, and significant dollar amount.

- **Department of Liquor Control Paper Bags** – This contract provides for paper bags used in Department of Liquor Control (DLC) retail stores. The solicitation specified the required dimensions and thickness for each of five bag sizes. Vendors submitted sealed bids for each bag size with an assumed purchase of 500,000 units of each size. Bid prices were to include delivery cost to a specified location within a specified time frame. Three vendors submitted sealed bids. The contract was awarded to the responsive and responsible bidder with the lowest extended price. (Although the winning bidder offered

bags in dimensions that differed slightly from those specified in the solicitation, DLC determined that the variation did not constitute a material change from the specifications.)

- **Recreation Department Apparel** – These two contracts provide t-shirts and other apparel for Recreation Department staff and athletic league participants. Each contract included material, design, and fabric weight specifications for apparel grouped by different sizes, styles, and printing. The Recreation Department elected to issue both contracts under the Local Small Business Reserve Program (LSBRP). Each contract attracted two LSBRP qualified bidders. The contract was awarded to the responsive and responsible local small business that bid with the lowest extended price.

In addition, Office of Procurement staff identified a current contract that was awarded in 2014 that could have been suitable for reverse auction bidding. The County Government was the lead agency in a COG cooperative purchase of road deicing rock salt (IFB #1041647). This solicitation had bidding opportunities for four zones – Suburban Maryland (two counties, five cities, two school systems), Suburban Virginia (two counties, six cities/towns, two school systems), Suburban DC (WMATA and DC DOT), and Southern Maryland (one county). The solicitation included a detailed description of the product specifications (American Society for Testing Materials Specification D632-94). Bidders offered per ton unit prices for rock salt (with and without delivery) for each zone. Three vendors bid on at least one of the four zones.

## 2. Potential Future Use

The Department of General Services (DGS) is currently working with the Office of Procurement to issue a request for proposal (RFP) to contract with a service provider to host reverse auction(s) for the future County Government and/or COG purchases of fuel. DGS intends for the RFP to retain the service provider to conduct reverse auctions for other County Government purchases as needed during the term of the contract. In evaluating responses to the RFP, DGS intends to consider the capability of vendors to execute real-time, online reverse auctions for commodities other than fuel.

## F. Use of Reverse Auctions by Other County Agencies

As mentioned above, MCPS had previously participated in a COG sponsored reverse auction for the cooperative purchase of natural gas. Other than that event, MCPS, Montgomery College, the Maryland-National Capital Park and Planning Commission, and the Washington Suburban Sanitary Commission have not engaged in reverse auction procurement.

## CHAPTER 5: FEEDBACK AND CASE STUDIES FROM OTHER JURISDICTIONS

Reverse auctions have been used by government since the 1990's. With the emergence of Internet-based online auction tools in recent years, the use of reverse auctions has increased among all levels of government. This chapter provides a summary of feedback and select case studies on reverse auctions:

- **Section A** summarizes the feedback OLO heard from other jurisdictions who have completed reverse auctions, along with local stakeholders in the reverse auction community. This feedback parallels the review of academic and government assessments summarized in Chapter 3.
- **Section B** provides a summary of four case studies of jurisdictions using reverse auctions. In addition to Internet research, OLO spoke with representatives from each jurisdiction. Each case study provides a summary of the reverse auction event and discusses the impact on cost savings.

Case Study	Begins on Page
Kentucky Association of Counties (Road Salt)	27
State of Maryland (Electricity)	29
City of Philadelphia (Recycling Bins)	31
San Diego County (Tree Removal Services)	33

### A. Feedback on Reverse Auctions

OLO interviewed multiple state and local government procurement officers who have managed reverse auction purchasing. This section provides an overall summary of feedback OLO heard from other jurisdictions, as well as current and former reverse auction vendors.

#### 1. Cost Savings

Without exception, the procurement officers expressed a strong belief that reverse auctions produce significant cost savings when used to purchase certain types of goods and services (see next section). The perception of cost savings held true even when considering the offsetting costs associated with running a reverse auction.

OLO has not identified a state or local government that could definitively determine the precise cost savings attributed to a reverse auction. Such a definitive determination would be extremely difficult to calculate as it would require a buyer to conduct nearly identical bid solicitations at nearly the same point in time. Some procurement offices have estimated cost savings based on a comparison of prices generated by similar solicitations issued in one year as a sealed bid and the next year as a reverse auction. However, all acknowledge that the bidding methodology is but one of multiple factors that influence pricing. Under all bidding methodologies, contract costs for most goods and services are subject to fluctuations based on changing market conditions such

as product supply, demand for the product, transportation and labor costs and the number of potential sellers. As such, OLO considers the experience of state and local governments as indicative of the general effect of reverse auctions on price but insufficient to calculate a precise savings attributable solely to the implementation of reverse auction bidding.

## **2. Goods and Services Best Suited for Purchase via Reverse Auction**

Most procurement officials OLO interviewed believe that reverse auctions are best suited for goods or commodities with very detailed specifications. However, in a few cases, state and local governments have employed reverse auctions to purchases services. As detailed in later in this chapter, for more than a decade, San Diego County, California, has used reverse auctions to procure tree removal services. As another example, Maricopa County, Arizona, selected a life insurance provider for County employees by means of a reverse auction.<sup>1</sup> Similar to the purchase of goods, reverse auctions have been successfully used for the purchase of services for which the performance, experience, and other contractor qualifications are clearly and narrowly specified.

OLO found that reverse auctions have not, and should not, be used for purchases of goods and services that have poorly defined product standards or that involve flexible or complex requirements.

## **3. Contract Dollar Amounts**

OLO found near universal agreement among public sector procurement officers as well as private sector source selection service providers that reverse auctions are inappropriate for small scale purchases. The dollar value for small purchases are unlikely to offset the administrative and staff costs associated with executing a reverse auction. In fact, private service providers (especially those that are compensated as a percentage of the purchase price) commonly establish a minimum contract value for reverse auctions.

## **4. The Role of Price and Pre-Qualification in Contract Awards**

A reverse auction is a bidding mechanism that places the primary focus on price as opposed to other criteria such as product design or vendor experience. As detailed in Chapter 3, some analysts raise the concern that reverse auctions may improperly diminish the role of non-price factors, such as vendor qualifications, experience, and past performance, in the contract award process. OLO found that government buyers that use reverse auctions mitigate the role of price in contract awards by establishing a rigorous pre-qualification standard prior to the bidding stage of the procurement process. In releasing the invitation to bid, the buyer establishes minimum acceptable qualifications for bidders. These qualifications may relate to the vendor's credentials, experience, expertise, past performance, labor pool, equipment, and other standards. Vendors must demonstrate that they meet all the pre-qualification standards to be included in a short list of those invited to bid in the reverse auction. The pre-qualification process serves to incorporate past performance, experience, and other non-price factors into reverse auction source selection. Furthermore, as mentioned above, procurement officials concur that reverse auctions should not

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<sup>1</sup> Anderson, Larry, *Reverse Auctions Lower Costs of Employee Benefits* in American City & County, October, 1, 2012, <http://americancityandcounty.com/fiscal-management/reverse-auctions-lower-costs-employee-benefits>.

be used for purchases of goods or services that involve flexible or complex evaluation of vendor qualifications.

### **5. Effect on the Vendor Community**

None of the procurement officers interviewed by OLO reported that the use of reverse auctions altered the number or type of vendors that submit bids.

### **6. Fee Structure**

While all the procurement officers interviewed by OLO acknowledged that reverse auction fees offset cost savings, all also concurred that reverse auctions yield lower net costs when used for the purchase of suitable goods and services (see subsections 1 and 2 above).

OLO found that most public sector buyers directly pay the service provider user fee (either as a flat fee or as a percentage of the actual purchase amount) rather than imposing the fee on the seller. The most notable exception to this rule involves energy purchases. Frequently, buyers of electricity and fuels ask the vendors to incorporate the reverse auction service provider fee into their per unit (kilowatt/hour, gallon, etc.) bid prices.

## B. Case Studies

This section summarizes four case studies of other jurisdictions' experiences with reverse auctions.

### Road Salt - Kentucky Counties & Cities

#### **BACKGROUND:**

The Kentucky Association of Counties (KACo) is a non-profit membership organization that serves the 120 Kentucky counties. The Kentucky League of Cities (KLC) is a nonprofit membership organization that serves 380 Kentucky cities and municipal agencies.

#### **USE OF REVERSE AUCTIONS:**

KACo has employed reverse auctions to purchase commodities – including roadside equipment, emergency vehicles, water lines, and road salt – on behalf of its member counties. In general, procurement terms and conditions, product specifications, and vendor eligibility requirements for reverse auctions are identical to those of solicitations offered through a sealed bid process. Kentucky state law prohibits the use of reverse bids for professional services and construction contracts.

For more than a decade, KACo has sponsored a reverse auction for the purchase and delivery of road salt on behalf of Kentucky counties. Three years ago, KLC joined as co-sponsors of the road salt reverse auction. For the annual auction, KACo and KLC jointly issue an online solicitation for road salt with defined specifications (e.g. sodium chloride Type 1, Grade 1 delivered in free-flowing, usable condition, free from lumps and foreign material with a moisture content not to exceed 2.0%).

To participate in the auction, vendors must meet eligibility requirements and register with the online reverse auction host (Orbis Online). On the designated date, the online reverse auction remained open for bids for a 30-minute period. Vendors bid unit prices per ton of salt (including delivery) for up to 60 participating counties and cities grouped into 18 different regions of the state. For the reverse auction held in May 2017, a total of seven vendors submitted at least one bid.

Following the close of the reverse auction, each county and city retained the right to accept or reject any or all bids. Participating counties and cities may evaluate which bids are most advantageous considering price, conformity to the specifications, and other factors (such as delivery time, uniformity of product, and the bidder's ability to supply the product).

Counties and cities may also reject bids from vendors that have previously defaulted on a contract. Counties and cities that purchase road salt through the online auction must pay a fee of 1.5% of the total purchase to Orbis Online.

**OUTCOME:**

KACo reports that its reverse auctions in general typically save counties 5% to 15% compared to traditional sealed bid procurements. Officials in Campbell County, Kentucky report that the KACo road salt reverse auction produced a cost per ton of \$56.50 in 2017. This price represents an approximately 10% reduction from the cost paid in 2008, the last year the County purchased road salt solely through sealed bids. However, the Campbell County officials note that road salt prices often fluctuate greatly year-to-year based on past and projected weather conditions. As a result, it is difficult to measure how much of the cost savings is attributable to the reverse auction.

**LESSONS LEARNED:**

A KACo official indicated that member counties seemed satisfied with the results of the road salt reverse auction and that the number of participating counties and cities has steadily increased in recent years. The official believes that two factors contribute to the cost savings produced by the KACo reverse auction for road salt:

1. The reverse auction process prompts vendors to offer more competitive pricing than they would through a sealed bid.
2. The pooling of bid requests from multiple counties and cities creates an economy of scale that allows bidders to offer lower prices.

KACo believes that reverse auctions are best suited for the purchase of commodities with narrowly defined specifications. Nonetheless, the KACo official suggests that allowing some range of variation in product specifications (such as the horsepower standard for maintenance equipment) allows for a greater number of vendors to participate, thereby increasing competition, and potentially driving down prices.

Finally, the KACo official cautions that a reverse auction process that posts all bids exposes vendors' margins to their competitors. As such, reverse auctions are best used for commodities offered by multiple vendors.

Sources: Telephone interview with Mr. Scott Martin, Kentucky Association of Counties, August 3, 2017.

<https://www.kaco.org/en/member-services/reverse-auctions.aspx>

## Electricity - State of Maryland

### **BACKGROUND:**

The Maryland Department of General Services (DGS) procures electricity for accounts serving State Government facilities. For the largest electricity accounts, DGS purchases electricity through a “block and index” strategy which locks in rates for a portion of future electricity needs with an opportunity to procure power for remaining needs at real-time rates. Only facilities that have very high electricity use and are equipped with interval (time of use) metering are eligible for block and index contracts.

For the remaining 2,000+ accounts, DGS purchases electricity at fixed per kilowatt hour prices by means of periodic reverse auctions.

### **USE OF REVERSE AUCTIONS:**

DGS conducted its initial electricity reverse auction in 2004 and has held eight subsequent auctions, most recently in May 2017. Prior to each reverse auction, DGS issues a notification alerting electricity suppliers of the upcoming bidding. DGS pre-qualifies vendors based on multiple factors including vendor size, resources, experience, past performance, and financial capability.

DGS groups the 2,000+ accounts in 12 different clusters, called tranches. Each tranche includes accounts from the same utility zone and a set contract duration. For example, one tranche would include all accounts served by PEPCO and would accept bids for a potential three-year contract. Another tranche would include BG&E accounts for a potential four-year contract. DGS provides bidders with estimated usage kilowatt hour demand for each account but does not guarantee purchase of any minimum level of electricity consumption.

DGS electricity auctions typically attract four to five bidders. Online bidding for each of the 12 tranches lasts for five minutes. At the conclusion of the reverse auction, DGS selects vendors for accounts in each of the four utility zones and awards contracts with the most advantageous combination of unit price and duration. While past auctions have most commonly resulted in three-year contracts, DGS determined that the pricing offered in May 2017 warranted entering into four-year contracts.

A third-part service provider, EnerNoc (formerly called World Energy), hosts the DGS electricity reverse auctions. EnerNoc has been the State’s provider for all electricity reverse auctions held since 2004, apart from one auction held in 2011. DGS pays EnerNoc a flat fee for running the auctions.

In 2016, DGS expanded the program to allow counties, municipalities, school systems and non-profit organizations to participate in the electricity reverse auctions.

**OUTCOME:**

DGS conducted an audit to estimate the effect of employing reverse auction bidding on electricity purchase costs. The audit concluded that the reverse auction produced annual cost savings of an estimated \$1.8 million in Fiscal Year 2016 and an estimated \$1.4 million in Fiscal Year 2017 based on known market prices. Nonetheless, DGS officials acknowledge that the precise cost savings cannot be known with certainty as the State did not issue traditional sealed bid solicitations for electricity concurrent with the reverse auctions.

**LESSONS LEARNED:**

State electricity purchasing officials characterize their experience with reverse auctions as a success. While DGS has found that reverse auctions require more staff preparation time than sealed bids, the Department has concluded that cost savings significantly exceed additional staff time costs. State officials consider reverse auctions as the preferred methodology for electricity procurement and plan to continue their use in future years.

Sources: Telephone interview with Mr. Lionel Hill, State of Maryland Department of General Services, October 10, 2017.

[http://dgs.maryland.gov/Annual%20Reports/2016\\_AnnualReport.pdf](http://dgs.maryland.gov/Annual%20Reports/2016_AnnualReport.pdf)

<http://dgs.maryland.gov/Pages/Energy/Purchasing.aspx>

## Recycling Bins - City of Philadelphia

**BACKGROUND:**

In May 2016, the City of Philadelphia undertook a large-scale overhaul of the City’s procurement system to fully automate contract processing procedures, to increase the use of reverse auction bidding, and to foster better collaboration between prime and sub-contractors through open data practices. The City also amended the City’s Home Rule Charter to allow the city to negotiate procurement contracts using a "Best Value" approach, rather than the current procedure that awards contracts to the “lowest responsible bidder.”

**USE OF REVERSE AUCTIONS:**

The City of Philadelphia recently piloted the use of reverse auctions through the service provider, Procure-X. Procure-X assists the City pre-qualify all bidders, provides bidders with reverse auction training, and meets with Procurement and department staff weekly to identify commodities to procure with reverse auctions. Procure-X is paid by the vendors as a percent of the contract (up to a pre-determined capped amount). The City does not pay a fee to the service provider.

**OUTCOME:**

The City has awarded six contracts through reverse auctions since May 2016 including for the procurement of toweling for prisons, water chemicals, paper products, gasoline, and concrete slabs. The City provided OLO with the estimated cost savings from four of the reverse auctions:

Products	Event Date	Estimated Contract Savings		
		Savings %	Amount	Contract Type
Toilet Paper	March 22, 2017	24.68%	\$92,818.06	Fixed Price
Toweling & Wash Cloths	December 16, 2016	33.00%	\$25,400.00	Fixed Price
Water Treatment Chemicals	July 6, 2017	<1.00%	\$10,077.00	Fixed Price
Concrete Slabs	August 30, 2017	12.84%	\$41,084.00	Fixed Price

One particular success of Philadelphia’s use of reverse auctions was the acquisition of recycling bins for distribution to residents throughout the City. According to a local news article, a recent sealed bid solicitation attracted bids for the bins that with per unit prices that were considerably higher than prices in the previous contract from 2008. In the next bid cycle, the City used reverse auction bidding. This solicitation attracted a winning bid with unit prices 30% below those in the previous contract (resulting in a cost savings of approximately \$144,000).

**LESSONS LEARNED:**

A representative from the City's Procurement Department indicated that the City was pleased with the use of reverse auctions and anticipates increased use in the future. However, the representative suggested that a jurisdiction considering the use of reverse auctions first conduct a pilot. In addition, the procurement official offered the following as best practices:

- Reverse auctions are best suited for specific goods and commodities. Past attempts by the City to use reverse auctions for services did not yield successful results. However, the City hopes to use reverse auctions in the future for services.
- All bidders must be properly vetted prior to the auction and there should be at least two bidders but preferably more.
- Buyers must be aware of market conditions, as they have a significant impact on the success of a reverse auction.
- A jurisdiction should create a framework for a reverse auction platform within an updated electronic procurement system.
- Procurement staff should involve department staff in the identification of potential procurements which could benefit from reverse auctions.

Sources: Telephone interview with Ms. Janira Barroso City of Philadelphia, October 20, 2017.

<http://www.govtech.com/Philadelphias-Procurement-Overhaul-Includes-Reverse-Bidding-Open-Data-Practices.html>

<https://beta.phila.gov/press-releases/mayor/city-issues-rfp-for-reverse-auction-bidding-system/>

<https://whyy.org/articles/how-cities-are-using-reverse-auctions-to-save-money/>

<https://www.bizjournals.com/philadelphia/news/2016/09/13/philly-bidding-rfps-docusign-procurement-paperless.html>

## Tree Removal Services - San Diego County

### **BACKGROUND:**

The San Diego County Department of Purchasing and Contracting provides centralized procurement services for County departments. The County has developed and implemented an interactive online procurement application (called “BuyNet”) for vendors to register, receive email notifications, download documents, respond to solicitations, and view awarded contracts. The County currently is working to upgrade its procurement application to allow for online submission of vendor bids and proposals.

### **USE OF REVERSE AUCTIONS:**

San Diego County has employed reverse auctions since 2004. The County has used reverse auctions to purchase a variety of goods including vehicles, correctional facility linens, copying machines, and food products. In addition, San Diego County has awarded contracts for a service, dead tree removal, by means of a reverse auction. At present, the County has temporarily put use of reverse auctions on hold pending completion of an upgrade to its online procurement application.

From 2004 through 2010, San Diego County conducted eight reverse auctions to award contracts for removal of dead and diseased trees (as part of the County’s fire prevention program). Before the first auction, the County Department of Purchasing and Contracting issued a “request for statement of qualifications (RFSQ)” that invited vendors to apply to pre-qualify for the tree removal reverse auction. The RFSQ listed all the criteria that vendors must meet to be eligible to submit bids for future tree removal solicitations. To qualify to bid, each vendor had to submit documentation demonstrating that it met criteria related to licensing, prior experience, staffing, worker training, equipment inventory, and insurance. The Department of Purchasing and Contracting certified vendors who met each of the eligibility criteria as eligible to participate in subsequent tree removal reverse auctions.

Each of the eight tree removal reverse auctions was conducted to award a contract for a distinct geographic area of the County. Prior to each auction, the Department of Purchasing and Contracting prepared a “request for bid (RFB)” that included a scope of work and contract specifications. Specifications in the RFB included the number and location of trees to be removed, tree cutting procedures (based on California regulations and published industry standards), maximum stump heights, wood removal requirements, pesticide use protocols, and public notification requirements. While San Diego County has implemented a policy to provide a contracting preference to veteran-owned businesses, this preference was not applied to the tree removal contract solicitation.

For each reverse auction, pre-qualified vendors submitted bids online on a designated date during a pre-determined window of time. Vendors bid a unit price per tree for large trees (six or more inches in diameter) and a unit price per acre for small trees (less than six inches in diameter). During the duration of the auction, vendors could submit an unlimited number of

lower bids provided that the new bid was less than the previous low bid by a pre-specified dollar increment. The County awarded the contract to the bidder with the lowest total extended price.

San Diego County contracted with a private firm (Ariba) to provide the software to conduct the reverse auction. The County paid an annual fee of \$55,000 for access to the reverse auction software. Neither the County nor contract awardees paid a percentage of the contract cost to the software provider.

**OUTCOME:**

Between seven and ten vendors pre-qualified to participate in each tree removal auction. Senior managers in the Department of Purchasing and Contracting report that the use of reverse auctions significantly reduced the cost of tree removal contracts. The Department estimates that in the first three years of awarding contracts via reverse auctions, the County saved an average of more than \$7 million per year compared to costs for contracts that preceded the use of reverse auctions.

**LESSONS LEARNED:**

Senior managers in the San Diego County Department of Purchasing and Contracting believe that reverse auctions are a valuable tool to reduce the cost of certain government contracts. These managers have concluded that reverse auctions can generate lower prices for goods and services previously procured in minimally competitive markets. While most of the reverse auctions have been for goods with narrowly defined specifications, San Diego County achieved its greatest reverse auction cost savings for a services contract (tree removal).

Purchasing managers in San Diego County have determined that reverse auctions produce cost savings; nonetheless, some of the savings are offset by additional administrative costs. The County Department of Purchasing and Contracting invests more staff time preparing for a reverse auction than for a traditional sealed bid purchase. Reverse auctions demand more staff time to pre-qualify vendors and to implement a live on-line bidding process. Given the greater administrative costs, the San Diego County purchasing managers recommend against using reverse auctions for relatively low-dollar value contracts.

Sources: Telephone interview with Mr. Allen Hunsberger and Melanie Caramat San Diego County, September 7, 2017.

<http://www.sandiegocounty.gov/cob/docs/policy/A-87.pdf>

<http://www.sandiegocounty.gov/cob/docs/policy/A-97.pdf>

<https://buynet.sdcountry.ca.gov/>

## CHAPTER 6. FINDINGS AND RECOMMENDATIONS

This first section of this chapter presents the Office of Legislative Oversight's (OLO) findings regarding the use of reverse auctions in government purchasing. The second section presents OLO's recommendations regarding the future use of reverse auctions by the County Government.

### A. Findings

OLO presents the following nine major findings from this report:

**Finding #1:** *State and local government procurement officers who have managed reverse auctions believe that reverse auctions can produce significant cost savings.*

OLO interviewed multiple state and local government procurement officers who managed reverse auctions. Without exception, these government officials stated that reverse auctions produced significant cost savings when used to purchase certain types of goods and services. This perception held true even when considering the offsetting costs associated with running a reverse auction.

**Finding #2:** *It is difficult to precisely calculate the direct effect of reverse auction bidding on contract price.*

Multiple academic and government studies of reverse auctions have concluded that reverse auctions can produce meaningful cost savings to public sector buyers. Several of these studies have attempted to quantify the percent savings attributable to reverse auctions in comparison to traditional sealed bid solicitations. Nevertheless, OLO could not identify a single state or local government that could definitively determine the precise cost savings attributed to a reverse auction. Such a definitive determination would be extremely difficult to calculate as it would require a buyer to conduct nearly identical bid solicitations at nearly the same point in time – a practice that is rarely undertaken.

Bidding methodology is but one of multiple factors that influence pricing. Under all bidding methodologies, contract costs for most goods and services are subject to fluctuations based on changing market conditions such as product supply, demand for the product, transportation and labor costs and the number of potential sellers. OLO considers the experience of state and local governments as indicative of the general effect of reverse auctions on price but insufficient to calculate a precise savings attributable solely to reverse auction bidding.

**Finding #3:** *Only certain types of goods and services are well suited for purchase via reverse auction.*

Nearly all studies and assessments of reverse auctions conclude that this bidding methodology is not appropriate for all types of purchasing. Reverse auctions are best suited for purchasing goods and services that are readily defined with precise, non-complex, and unambiguous specifications. In addition, reverse auctions have been found to work particularly well when purchasing items with minimal differences in product quality and which are sold by multiple

vendors. Reverse auctions should not be used for purchases of goods and services that have minimal product standards or that involve flexible or complex requirements. Reverse auctions are most commonly used to purchase goods. In a few cases, state and local governments have employed reverse auctions to purchase services, such as tree removal services.

**Finding #4:** *Reverse auctions are not appropriate for small dollar value purchases in which the cost savings do not offset additional costs.*

OLO found near universal agreement among public sector procurement officers and private sector service providers that reverse auctions are not appropriate for small scale purchases. The dollar value for small purchases are unlikely to offset the service provider fees and the administrative and staff costs associated with executing a reverse auction.

**Finding #5:** *Pre-qualification of vendors is essential when using price as the final determinant for contract award.*

A reverse auction is a bidding mechanism that places the primary focus on price as opposed to other criteria such as product design or vendor experience. Studies of alternative procurement methods have identified reverse auctions as most appropriate for purchases in which price can be the final determinant for contract award. For example, in most cases, the invitation for bid (IFB) method relies primarily on bid prices to determine which qualified vendor will receive a contract award. Some analysts warn, however, of the need to mitigate price as the prevailing factor in contract awards. They argue that reverse auctions may overly elevate the importance of price as compared to other factors, such as vendor qualifications, experience, and past performance.

OLO found that government agencies that use reverse auctions universally pre-qualify vendors prior to the bidding stage of the process. Government buyers establish minimum acceptable qualifications for bidders including those related to the vendor's credentials, experience, expertise, past performance, labor pool, equipment, and other standards. Vendors must demonstrate that they meet all the pre-qualification standards to be included in a short list of those invited to bid in the reverse auction. The pre-qualification process in the means to incorporate past performance, experience, and other non-price factors into reverse auction source selection.

**Finding #6:** *Government procurement officials interviewed by OLO do not believe that use of reverse auctions deters vendors from responding to solicitations.*

In the literature review conducted by OLO, the single greatest concern regarding reverse auctions related to the effect this source selection method has on the vendor community. A common critique is that reverse auctions unfairly aid the buyer at the expense of the seller by lowering profit margins. Thus, vendors may elect to opt out of solicitations offered through a reverse auction. Nonetheless, many analysts consider vendor dissatisfaction with reverse auctions as a temporary condition that stems from unfamiliarity with a relatively new source selection method. From this perspective, vendors will become more comfortable with reverse auctions as the method becomes more common. None of the procurement officers interviewed by OLO reported that the use of reverse auctions altered the number or type of vendors that submitted bids.

**Finding #7: *The Montgomery County Government has limited experience with reverse auctions; the County Government's sole use of reverse auctions has occurred for the purchase of energy supplies.***

The County Government's first venture into reverse auction procurement occurred in 2006 as part of a cooperative purchase of electricity. Subsequently, the County Government participated in a COG sponsored reverse auction for natural gas, and multiple COG sponsored reverse auctions for gasoline. The County Government has not ever used a reverse auction for the purchase of any other type of good or service. Today, the only active County Government contracts resulting from a reverse auction are for gasoline.

MCPS participated in a past COG sponsored reverse auction for the cooperative purchase of natural gas. Other than that event, MCPS, Montgomery College, the Maryland-National Capital Park and Planning Commission, and the Washington Suburban Sanitary Commission have not engaged in reverse auction procurement.

**Finding #8: *Some recent County Government contracts could have been suitable for reverse auction bidding.***

With the cooperation and assistance of the Office of Procurement, OLO examined recent County Government contracts that initially appeared to meet commonly accepted criteria for reverse auction bidding. Specifically, OLO reviewed IFB solicitations issued within the past year and selected those with an expected contract value of more than \$100,000 and for goods/commodities with clearly defined specifications. After more thorough examination, many of these contracts proved inappropriate for reverse auctions, primarily because of the nature of the contract specifications and the absence of multiple qualified bidders. However, a few recent contracts, in the judgement of OLO, would have been good candidates for reverse auction bidding. The contracts include those for the purchase of (a) paper bags for liquor stores; (b) shirts and other apparel for Recreation Department staff and program participants; and (c) rock salt for roadway de-icing.

**Finding #9: *A soon-to-be issued request for proposal will provide the County Government with access to reverse auction services.***

The Department of General Services (DGS) is currently working with the Office of Procurement to issue a request for proposal (RFP) to contract with a service provider to host reverse auction(s) for the future County Government and/or COG purchases of fuel. DGS intends for the RFP to retain the service provider to conduct reverse auctions for commodities other than fuel.

## B. Recommendations

Based on the above findings, OLO believes that reverse auctions could be appropriate for a limited share of County Government purchasing. The section presents OLO's four recommendations to the County Council.

**Recommendation #1:** *The Council should request that the Executive Branch educate departmental contract and budget managers about the soon-to-be-available reverse auction provider services available for County Government purchases.*

The Department of General Services (DGS) plans to award a contract with a service provider to host future reverse auctions for fuel and other commodities. Once this contract is executed, the Executive Branch should inform contract managers and budget managers in each of County Government department about the potential for reverse auctions to produce cost savings for certain purchases and of the availability of the service provider to host a reverse auction.

**Recommendation #2:** *The Council should request the Executive Branch to proactively review upcoming solicitations to identify goods and services that are suitable for reverse auction bidding.*

Not all goods and services should be procured through reverse auction bidding. Reverse auctions are best suited for purchasing goods (and possibly some services) that are sold by multiple vendors for products that have clearly defined specifications and minimal differences in quality. In addition, reverse auctions should be used only for contracts of sufficient dollar value to offset fees and additional administrative costs. OLO acknowledges that most County Government solicitations do not meet these characteristics. Nonetheless, some future contracts likely would be appropriate for reverse auction purchasing. OLO suggests that both the Office of Procurement and Using Departments should review upcoming purchases to identify those that could produce cost savings by means of reverse auction bidding.

**Recommendation #3:** *The Council should request that the Executive Branch pilot the use of reverse auctions for at least two procurements during the next 12 months.*

Following execution of the pending reverse auction service provider contract, the County Government should pilot the use of this bidding methodology. A pilot would allow for evaluation of several matters including:

- Methods for assessing the effect of reverse auctions on contract price;
- Alternative fees structures;
- Administrative and staffing requirements;
- Vendor pre-qualification procedures;
- Services provided by reverse auction online host; and
- Response from the vendor community to an alternative bidding process.

OLO suggests that the reverse auction pilot include a minimum of two solicitations (other than for fuel) during the upcoming 12 months.

**Recommendation #4:** *The Council should request that the Executive report to the Council in the Fall of 2018 on its efforts to: (a) educate departmental staff regarding reverse auctions; (b) identify goods and services that may be suitable for reverse auction bidding; and (c) pilot the use of reverse auctions.*

OLO suggests that the Executive Branch report to the Council in the Fall of 2018 on the topics addressed in the first three recommendations. Specifically, the report should describe:

- Efforts undertaken to inform departmental contract and budget managers regarding the potential use of reverse auctions and the availability of a service provider;
- Efforts to identify goods and services that meet the characteristics of a procurement that is suitable for reverse auction bidding; and
- The results and lessons learned from the pilot the use of reverse auctions.

## **CHAPTER 7. AGENCY COMMENTS**

The Office of Legislative Oversight circulated a draft of this report to the County Government. OLO appreciates the time taken by agency representatives to review the draft report and provide feedback.

OLO's final report incorporates technical comments and corrections submitted by County Government staff. Written comments on the draft report from the Chief Administrative Officer begin on the next page.



OFFICE OF THE COUNTY EXECUTIVE

Isiah Leggett  
County Executive

Timothy L. Firestine  
Chief Administrative Officer

MEMORANDUM

November 29, 2017

**To:** Chris Cihlar, Director, Office of Legislative Oversight

**From:** Timothy L. Firestine, Chief Administrative Officer

**Subject:** Draft OLO Report 2018-4: Reverse Auction Purchasing

Thank you for the opportunity to comment on Draft OLO Report 2018-4: Reverse Auction Purchasing.

We concur with the observation that reverse auctions may be a feasible purchasing strategy when the goods and services sought possess certain factors such as 1) capable of clear and unambiguous specifications; 2) minimal difference in product quality; and 3) the goods sought are sold by multiple vendors. Taken together, these factors indicate a uniformity in goods and a competitive marketplace. Where such conditions exist, price may be the only distinguishing factor for a purchaser to consider. Where these conditions exist, the reverse auction purchasing mechanism—which allows sellers to bid against each other by submitting price quotes in real-time until the lowest price submitted wins—allows the buyer to make a purchasing decision based on price as the only relevant determining factor.

As the report further notes, the circumstances where reverse auction would be a feasible purchasing strategy are rare and, therefore, the reverse auction strategy has been used by the County in three instances in the last 12 years. To identify additional instances in which the reverse auction purchasing strategy may be a feasible, appropriate, and cost-savings mechanism to acquire goods and services, we plan to award a contract with a service provider to host future reverse auctions. The Office of Procurement expects a contract award to take place in the Spring of 2018.

Following are the answers to the four recommendations noted in the draft:

**Recommendation #1: The Council should request that the Executive Branch educate Departmental contract and budget managers about the soon-to be-available reverse auction provider services available for County Government Purchases.**

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**CAO Response:** Outreach and education are necessary components of the reverse auction service provider's efforts to identify goods and services suitable for acquisition through the reverse auction mechanism.

**Recommendation #2:** The Council should request the Executive Branch to proactively review upcoming solicitations to identify goods and services that are suitable for reverse auction bidding.

**CAO Response:** As noted above, the identification of additional opportunities for the reverse auction purchasing method will be one component of the functions of the reverse auction service provider.

**Recommendation #3:** The Council should request that the Executive branch pilot the use of reverse auctions for at least two procurements during the next 12 months.

**CAO Response:** We believe it is best to await the findings of the reverse auction service provider to determine which commodities would best meet the reverse auction criteria noted above: 1) capable of clear and unambiguous specifications; 2) minimal difference in product quality; and 3) the goods sought are sold by multiple vendors. Taken together, these factors indicate a uniformity in goods and a competitive marketplace. Where such conditions exist, price may be the only distinguishing factor for a purchaser to consider.

**Recommendation #4:** The Council should request that the Executive report to the Council in the Fall of 2018 on its efforts to: (a) educate departmental staff regarding reverse auctions; (b) identify goods and services that may be suitable for reverse auction bidding; and (c) pilot the use of reverse auctions.

**CAO Response:** The time frame--12 months from issuance of this report—is insufficient to identify additional reverse auction opportunities, conduct the reverse auctions, and conduct a robust examination of “lessons learned.” We would suggest a time frame of 18-24 months.

Thank you again for your work on this report. If you have questions, please contact Fariba Kassiri, Assistant Chief Administrative Officer, at (240) 777-2512 or Fariba.Kassiri@montgomerycountymd.gov.

TLF:cb

- c: Fariba Kassiri, Assistant Chief Administrative Officer
- Bonnie Kirkland, Assistant Chief Administrative Officer
- Cherri Branson, Director, Office of Procurement
- David Dise, Director, Department of General Services
- Marc Hansen, County Attorney, Office of the County Attorney