Reprinted from Nation's Cities Weekly

A-96-01
II-A-581

Environmental Report

National League of Cities March 15, 1982

Buying Quiet is Good Buying Practice

by Steve Gordon

Local governments of all sizes are purchasing quieter, better equipment than they used to, and they are saving money in the process. The 350 cities, towns, and counties participating in the Buy Quiet Program of the National Institute of Governmental Purchasing are finding that quieter equipment, because it is better engineered, tends to be more energy efficient, requires less maintenance and lasts longer. They are also learning that quieter equipment increases productivity by lowering worker fatigue, and that its use lessens the likelihood of compensation claims by employees and constituents.

In addition to the value of noise reduction and purchase price, local governments and state agencies often include a variety of cost and value factors in their contract award formulas for equipment. Depending on the type of equipment, these other factors often include such quantifiable considerations as fuel costs, repair costs, and buy back or salvage value.

Consider, for example, a recent purchase of quieter more energy-efficient portable air compressors by Salt Lake City. By using a bid evaluation formula that considered purchase price, the value of noise reduction, and the cost of energy, the city purchasing agency obtained a projected savings of nearly $30,000 over the five-year, 2600-hour established life cycle of three air compressors.

Raw Bids

Bidder	Manufacturer	Noise level (dbA)	Fuel consumption (gal./hr.)	Price
A	Atlas-Copco	76.0	2.214500	$10,598
B	Ingersoll-Rand	76.0	2.381375	10,627
C	LeRoi-Dresser	74.5	2.898800	10,189
D	Sullair	76.0	2.690300	10,905

Revised Bids

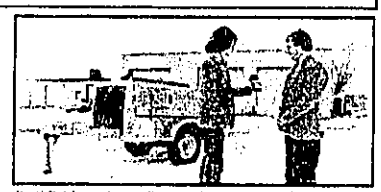
Bidder	Price	(−) Value of noise reduction	(+) Cost of energy	Evaluated bid price
A	$10,598	$0.00	$34,546.20	$45,144.20
B	10,627	0.00	37,149.48	47,776.48
C	10,189	317.40	45,221.28	55,092.88
D	10,905	0.00	41,968.68	52,873.68

Terry Anderson, a buyer in the Salt Lake City purchasing department used an evaluation formula developed at a June 1981 government-industry conference convened under the Buy Quiet Program.

The raw and revised bids tabulations show that awarding the contract to Bidder A (at a price of $10,598), rather than to Bidder C (at a price of $10,189), resulted in a projected savings of $9,948.69 per unit over the life cycle. Total projected savings for the three units purchased are $29,846.07.

Once the calculations for the value of noise reduction and the average of the bid prices were performed, the buyer then calculated an evaluated bid price for each bidder. The value of noise reduction, cost of energy and evaluated bid price for each bidder are shown in the revised bid tabulations.

Remember: there is no need for you to reinvent the wheel. If other governments have bought quieter, more cost-effective models of a product you are interested in buying, you can learn from their mistakes. Bid invitations, contract award data, and contact persons are a phone call or letter away. For additional information, officials should contact Terry Anderson, Salt Lake City Corporation, 320 Circuit Courts Building, 451 S. 200 East, Salt Lake City, Utah 84111. □



Patti Fricks, assistant director of environmental health for the Salt Lake City-County Health Department, and Terry Anderson of the city's purchasing department, measure the noise level of an air compressor.

Steve Gordon is the director of the Buy Quiet Program for the National Institute of Governmental Purchasing.

To the Mayor's Office, Quiet Products Sound Like Good Management

by George Latimer

The "Buy Quiet" program in the city of St. Paul is, in my opinion, the best approach to environmental control our city takes. Quite simply, this program demonstrates the benefits of using the indirect power of the purse to generate quieter, more energy efficient products. By including sound level measurements in purchase specifications, a purchasing department gains another quantitative measure of quality, and quiet specifications repeatedly have proven themselves to be indicators of quality.

Most cities have already been forced by the economy to review and improve their purchasing procedures. St. Paul, through the "Buy Quiet" program, has gone a step further in cooperative purchasing with other metropolitan communities in order to get the most for its dollar in today's purchases as well as affecting the design of products in the future. Our joint purchases of compressors, lawn mowers, chain saws, and fans have all been demonstrably successful.

The National League of Cities, through the National Institute of Governmental Purchasing, Inc. can provide your city with technical assistance to start your own "Buy Quiet" strategy. Over 350 local governments have already begun programs like ours. This is an approach I recommend because it once again proves the point that good energy and environmental policies also result in sound fiscal management. □

George Latimer is the mayor of St. Paul.

Buying Quiet Isn't a Big Deal for Small Cities

by Bill Dillon, Betty Bingham and Bill Peter

One of the oldest and worst myths around says that there is no reason for small cities to bother with professional purchasing staff, procedures, or techniques. "We don't purchase enough, often enough, to justify the expenditure required to support a full-blown operation," is the reason most often given by small town officials. What they are really saying is: "We can't afford to spend ten dollars to save twelve or thirteen."

Even for those cities that alone do not purchase enough, often enough, there still are several proven approaches for acquiring needed goods and services at the lowest total cost to the taxpayers. By total cost, we mean not only the total costs of owning an item or using a service, but also the administrative costs involved in obtaining what you need from outside sources to operate and deliver services.

Many local governments participate, for example, in what are known as piggyback intergovernmental cooperative purchasing programs and intergovernmental purchasing services. These types of programs are adequate so long as what you need is available through established contracts, accessible vendors, or warehouses. All too often, however, the performance, design, delivery, minimum order, and other requirements for items procured through such programs are determined solely by the sponsoring agency without any input from outside users. That is why cities need to seek out more controllable approaches to getting what they need at the lowest total cost. Two such

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approaches, both of which have been tested by experience, are joint bid intergovernmental cooperative purchasing (IGCP) and joint administrative (consolidated) purchasing.

Under the joint bid method of intergovernmental cooperative purchasing, two or more governmental units agree on specifications and contract terms and conditions for a commonly used item and combine their requirements in a single request for competitive sealed bids. Once bids have been received by the "lead" government, each entity issues its own purchase order or contract, is billed separately, does its own receiving and inspection, issues its own checks for payment, and resolves its own disputes.

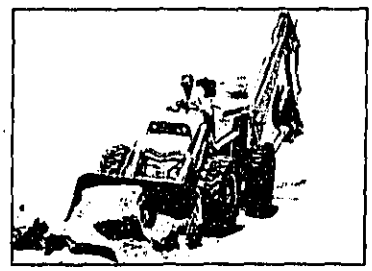
As a general rule, governments participating in a joint bid purchasing program will take turns serving as the lead agency, depending on the quantity they buy of the item in question and other factors. Joint bid programs generally involve only a limited number of common-use items.

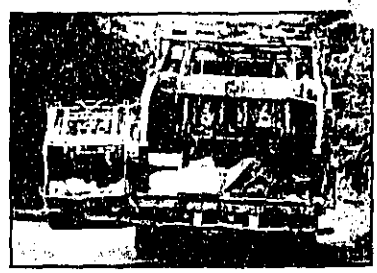
Joint administrative purchasing, on the other hand, is a more formal arrangement under which part or all of the purchases of two or more governmental units are made by a shared administative agency (a joint purchasing office) created for that purpose. It is similar to centralized purchasing (within a single government) in that it concentrates purchasing under one control. It is similar to intergovernmental cooperative purchasing in that it pools the commodity and service requirements of two or more governmental units.

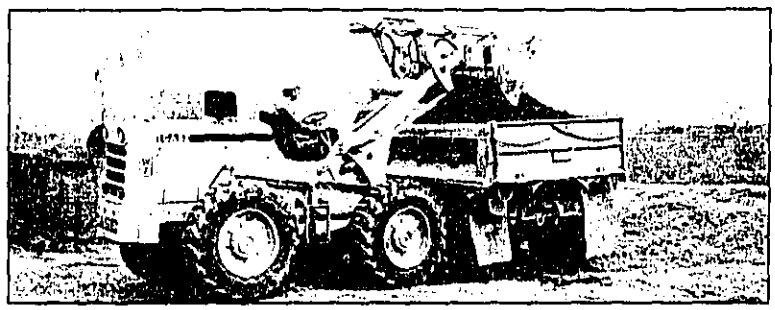
Both joint bid and joint administrative purchasing offer small local governments many benefits they would not otherwise enjoy, including:

- lower overhead costs, since one government performs a common function for several governments,
- better prices for "low volume" users of given items, since larger purchase quantities permit volume discounts for all participants, and
- better quality, thanks to more up-to-date specifications, which in turn result from one purchasing office's ability to "specialize" and to learn from the market research and in-service experience of a broader spectrum of users.

In addition, the increased buying power that is expressed in larger, more valuable purchases tends to do at least two more things for smaller cities and counties: first, it increases the possibility that their special (non-standard) requirements will be met at competitive prices; and, second, it assures that vendors and contractors perform as required. Big dollar stakes talk much louder than smaller ones.







Bid specifications for most kinds of equipment can include noise levels.

If you would like to have additional information on these two proven approaches for small city purchasing, the National Institute for Governmental Purchasing offers descriptive monographs on each one. The monographs are $7.50 each, including handling, and are available through the Coordinator, Education and Professional Development, NIGP, 1735 Jefferson Davis Highway, Suite 101, Arlington, Virginia 22202. □

Bill Dillon is the chief purchasing officer for Davenport, Iowa.

Betty Bingham is the chief purchasing officer for Louisville and Jefferson County, Ky.

Bill Peter is the chief purchasing officer for St. Paul and Ramsey County, Minn.

Checklist

Evaluating bids for noise reduction

The basic formula for evaluating equipment bids that include noise reduction as a criterion is simple. The evaluated bid price (EBP) is determined by subtracting the value of noise reduction (VNR) from the purchase price (P). Expressed as a formula,

$$EBP = P\text{-}VNR.$$

Determining the value of noise reduction, however, is a little more complicated. In the formula,

$$VNR = Y\ (P_A)\ (N_N\text{-}N),$$

VNR is the value of noise reduction,

P_{AV} is the average purchase price for all bids being considered,

N_N is the noise level of the noisiest model being considered,

N is the noise level of the specific model for which an evaluated bid price is being calculated, and

Y is the percentage of the average purchase price by which the purchase price will be adjusted for every decibel less noise than the noisiest model being considered. This percentage should be based on knowledge of the price range for the particular kind of equipment and on the extent to which the city is willing to pay more for a quieter product.

This is the evaluation method described in the articles on these pages. In the case of the air compressor purchase in Salt Lake City, fuel consumption and fuel costs were also considered in arriving at an evaluated bid price.

Two warnings are in order.

A provision in the specifications that limits the premium the city is willing to pay above the average of the actual purchase price is a good way to keep from paying too much for a quieter product.

And it is worth checking with the city attorney or legal counsel to be certain that awarding contracts on the basis of evaluated bid prices rather than actual bid prices will not open the bidding and purchasing procedures to legal challenge.

Information from the National Institute of Governmental Purchasing.

Small City Selects Quiet Trash Truck

With assistance from the Prince George's County procurement and materials management division, Greenbelt, Md. (population 16,000) has purchased a quieter, twenty cubic yard, rear loading refuse collection truck. The unit, which consists of a Ford truck and a Pak-More compactor, has a certified noise level of 79 decibels (A Scale) based on the Environmental Protection Agency's sound level measurement procedure for trash compactor trucks. Greenbelt had specified a maximum noise level of 79 decibels and included a 1 percent reward (or compensatory) factor for each decibel of quietness below the maximum level.

The tabulations were as follows:

Bidder	Noise level (dbA)	Actual bid price	Evaluated bid price
A	79	$51,900.00	$51,900.00
B	79	$45,181.00	$45,181.00
C	78	$49,686.00	$49,175.39
D	71	$57,615.00	$53,527.32

The evaluated bid price for each unit is based on the formula the county used to select the contract recipient.

Other cities known to have purchased quieter refuse collection trucks under the "Buy Quiet" Program include the cities of Inglewood, California and Albany, Georgia.

For more information on this purchase, contact James E. Doremus, chief purchasing and procurement officer, of Prince George's County Materials Management Division at (301) 952-3735. □

This National League of Cities special report on ways to solve local noise problems was prepared under a contract from the U.S. Environmental Protection Agency. The views expressed are those of the authors and do not necessarily reflect the official position of NLC or the Environmental Protection Agency.