

Reverse Auctions.. are they for you?

Given the sheer numbers of computers and the far reach of the Internet, you are probably aware of the widespread use of online auctioning for the sale of goods. Therefore, it should be a surprise to no one that owners would think of a way to use them to get lower prices for purchase of goods and services. The concept is to describe what someone wants to buy and then let providers compete with one another to lower their prices until a pre-set time or other cut-off, and it is called electronic reverse auction bidding.

A typical format for reverse auction is as follows:

- Potential bidders obtain all contract documents electronically.
- A third-party service conducts the auction online with all bidders.
- Sets an auction start and end time.
- The identities of bidders are kept confidential during the auction.
- Bidders submit prices, which are ranked and sent back to all bidders.
- Bidders can re-submit lower prices until the closing time.
- At the closing time, the lowest price is determined and all bidders are notified.



Construction projects and contracting fall into a gray area that can create serious problems for the buyer. Some states successfully using electronic procurement for commodities have found that it is not as easy to use it in construction. The gray areas, such as differing local conditions, codes or labor markets are what make it more complex to compare "apples to apples." The underlying purpose of a reverse auction is, like any other form of bid shopping, to compel contractors to sharpen their pencil points until they resemble hypodermic needles. Reverse auctions may work OK in buying commodities, but construction is far from a commodity.

Perhaps the most disturbing thing about reverse auctions is that they do treat construction as a commodity, as if all providers were the same and only the price differential between them is important. It ignores the fact that it's in an owner's best interest to seek not the lowest price, but the best price for a given project. The best price requires evaluating the performance capabilities of GCs and their subs, and determining whether lower bids may end up costing more in the long run. Computerizing a reverse auction takes those subjective factors out of play.

Contractor coalitions in Minnesota, Texas and California have lobbied successfully to restrict reverse auctions in their jurisdictions. Other states are working on similar restrictions. Also, legislation has been introduced in Congress to prevent bid shopping. H.R. 1348, introduced by Rep. Paul Kanjorski (D-Pa.), includes provisions for eliminating reverse auctions for federal construction.



Engineering Water Art

Water is one of the most precious natural materials. It is essential for sustaining life and for the operation and maintenance of industrial plants. Besides its life-supporting and other essential applications, water has been combined with hydraulic systems for aesthetics, amusement, and relaxation since ancient times.

Probably everyone has seen captivating water fountains in public buildings, amusement parks, or private houses. The purpose of a fountain can be to beautify the

environment, to provide evaporative cooling, to create a special effect, to mask traffic noise, or to serve as an aid to relaxation. History records that the rulers of ancient Egypt and Mesopotamia incorporated fountains in their palaces for decorative and evaporative cooling purposes. Today water fountains have grown to become more than just flowing water. The creative control of water flow has matured into a form of artistic expression unlike any other.

Shown above and below are the sophisticated and elaborate fountains at the Bellagio Hotel, operated by MGM Grand Inc. in Las Vegas. About 1,200 nozzles are installed in a man made lake with a volume of 27 million gallons. Compressed air is used to push out large masses of water that reach heights of 240 feet. The water jets are enhanced by 4,500 underwater lights and 230 gallons per minute of fog, and are accompanied by music. As much as 17,000 gallons of water can be in the air at any one time. A show lasts about five minutes and uses 25,000 cubic feet of compressed air to drive the water jets. Some of the nozzles can pivot through precise maneuvers via motor control technology, causing a dazzling curving flow of water. As a result, the water jets are made to literally dance as the music is played. The sequences of water jets and rotation of nozzles are controlled by computers to coordinate with specific pieces of music. The total load is 7 megawatts and 350 miles of electrical wire was used.

Given the recent engineering developments in the physics and control of water, added to readily available computer control systems, insures that we have only scratched the surface of this new artistic medium. In many of our own homes and places of business, fountains of all types and sizes continue to add the calming effect of the sound and sight of moving water. There has always been a somewhat magical draw to water. Fountains are one way to bring that magic and ambiance to places far from natural bodies of water.



What's Goin' On?

May 12th & 13th - Cool Roofing Seminar, Roof Consultants Institute Foundation - Atlanta, GA

May 21st - 26th - AIHce 2005 Conference - American Industrial Hygiene Association, Anaheim, CA

May 30th - Jun 2nd - IEA Heat Pump Conference - ASHRAE, Las Vegas, NV

Jun 25th - 29th - ASHRAE Annual meeting - Denver CO

HVAC SEER RATINGS

The SEER (Seasonal Energy Efficiency Ratio) describes how much heat in BTU's a particular air conditioner will remove for each watt of electricity it consumes. In reality your chances of buying a 12 SEER unit and getting a 12 SEER in your building may be less than 2 in 10.

A recent study of various sites indicated that, 56% of those inspected had an improper refrigerant charge causing an estimated waste of about 12% in energy. Two thirds of the units had insufficient air flow to the conditioned space. A deficiency of only 20% in indoor air flow on a heat pump or air conditioner degrades the SEER by 17%. This means a 10 SEER unit will operate as an 8.3 SEER unit. Duct leakage greater than 20 square inches was found in 93% of the sites tested. On average, duct leakage caused a 25% loss in efficiency. Control problems were found in about 53% of all heat pump systems reviewed.

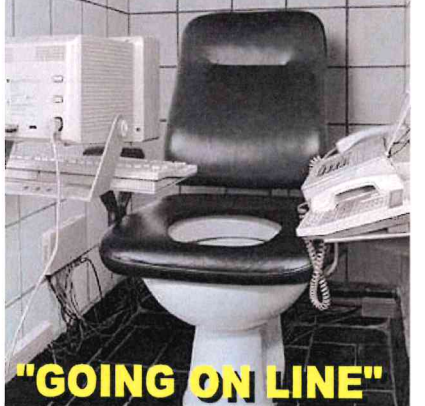
It's not difficult to see that the major point to consider when evaluating new equipment as to energy efficiency, is how well the system is installed and maintained throughout its operating life. It's better to buy reasonably, install properly, and maintain regularly than to focus on the highest SEER ratings.

DON'T be too hard on our politicians. Many of them are doing the work of two men - Laurel and Hardy.



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A DEAR MOM LIY

e-mail or FAX your answer to our office. If more than one correct entry is received, a winner will be selected at random.

If you submit your answer by e-mail, you must write "Newsletter Contest" in the subject line of the message to avoid our SPAM mail filter.

The answer to the riddle from last time was "a parachute"
We received 12 correct submissions.

James Senatro	Consulting Engineering Services
Jesse VanCamp	Consulting Engineering Services
Robert Winkelstern	Ridgefield Schools
Jackie Heck	MMI related (not eligible to win)
Rick Andrews	Louis Dreyfus Properties
Cath Gorman	MMI related (not eligible to win)
Ron Howe	MannKind BioPharmaceuticals
John Gedney	The Taunton Press
Robert Heslin	Louero Engineering Associates
Tom DiBlasi	DiBlasi Associates
Art Sanders	Hoffmann Architects
Paul Thomaz	Charles Beckman Swanson Architects

Just 100 years ago...

- 95% of all births took place at home.
- Life expectancy in the U.S. was 47 years.
- 86% of all homes had no bathtub.
- 92% of the population didn't have a phone.
- There were 8,000 cars and 144 miles of paved roads.
- Maximum speed limit in most cities was 10 MPH.
- Average wage was 22 cents per hour.
- Population of Las Vegas NV was 30.
- 94% of Americans didn't have a high school diploma.
- Marijuana, heroin and morphine were legal over the counter drugs.
- 90% of all physicians had no college education.
- 18% of all homes had at least one full time servant.
- Gasoline was 5 cents per gallon, good whiskey 50 cents a quart.
- Mechanical engineering was the highest paid profession, twice that of doctors and dentists.
- Over 50% of the U.S. population were males under 23 years old.



Six Phases of a Project

- ENTHUSIASM
- DISILLUSIONMENT
- PANIC
- SEARCH FOR THE GUILTY
- PUNISHMENT OF THE INNOCENT
- PRAISE & HONORS FOR THE NON-PARTICIPANTS

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