## LIFE CYCLE COSTING . . . A MANUFACTURER'S GENERAL PERSPECTIVE

## Coke Mattingly Caterpillar Inc.

One of the most important jobs of a governmental official is to justifiably allocate public funds for equipment procurement. This requires the balancing act of equipment needs, budget constraints, and taxpayer's scrutiny. Each of these forces plays a powerful role in purchasing equipment. It's not an easy job. It demands selecting and substantiating one product over another. The ultimate goal is to make the right decision offering the best return for the public.

"Life Cycle Costing" (LCC) has become an effective method of equipment acquisition. This concept is based on understanding that the price of the machine is not stagnant and continues to grow after the initial purchase and throughout the period of ownership. These added expenses are many times unknown and can place a heavy burden on cash flow or budget controls. Operating expenses, maintenance and downtime, plus productivity and resale value must be part of the total equation to fully understand the actual price of the equipment. LCC puts the ability to control these elements in the hands of the buying agency. Having the ability to predetermine and limit equipment costs, plus a guaranteed resale value help minimize financial and political risk and maximize return on capital invested in equipment. This is the goal of a public official.

Through LCC bids the buying agency can tailor a bid specification unique to their operational needs. LCC contracts can be multifaceted and include guarantees on repair and labor costs, uptime and parts availability, plus guaranteed buy backs. Contracts could be a lease or outright purchases, and range from 1 year to 7 years. Once these specifications have been developed by the buying agency, based on its needs and desires, it is up to the supplier to review the specifications, evaluate its product and determine its capabilities to provide the services the agency has requested. In other words, it's up to the manufacturer and its distribution network to develop the product and capability to provide the buying agent the best bottom line.

This causes several challenges for the manufacturer. The first requirement for any manufacturer is to provide a machine that is within the customer's basic specifications. This would include type of unit, horsepower and weight or other general requirements. At this point, if it's a low bid situation, any unit meeting these specifications would qualify for the bid, regardless of its performance characteristics, reliability, durability or resale value. But, if the bid is based upon performance guarantees such as LCC, this unit may or may not qualify for the bid.

Because LCC is based upon machine performance and value, the manufacturer has to face many engineering and manufacturing considerations. First, if the unit is not designed or produced to support contractual guarantees, it becomes economically prohibitive to offer this value to the buying agency. Each process of equipment design and quality must be reviewed on its ability to contribute to the performance of the unit over a period of time. The risk of short and long term performance lies heavily on the manufacturer's engineering and design philosophy. It forces manufacturers to evaluate their products on the basis of total net cost to the user.

Once the product is produced, the focus centers on the relationship between the manufacturer and the dealer network. It is vitally important the dealer and manufacturer share the same philosophy concerning product support and customer satisfaction. The equipment dealer is the foundation for product support. The dealership has to be financially sound, reliable and committed to have the capability of offering LCC type of sales contracts.

If the LCC equipment bid has limits on repair and labor costs and a maintenance contract, it is necessary dealers have fully trained mechanics with the appropriate diagnostic tools to insure service work is done correctly, promptly and efficiently. Equally important is the dealer's commitment to parts inventory and good cost controls to maintain an efficient sound operation. In simple terms, LCC contracts place the burden on the dealers to be efficient and responsive. The buyer benefits from this burden.

Buyback guarantees require a dealer to make an up front commitment to the purchasing agent. They have to understand the used equipment market. Knowing the future value of the product is essential to this type of bid. Also, the dealer needs to be bonded to protect the governmental agency.

Finally, the dealer has to be flexible. LCC bid specifications can have many different conditions and clauses. The dealer has to be able to meet each of the requirements of the bid. This may require commitments the dealer has not done before. However, the dealer has to ultimately determine whether it can meet the obligations of the specifications. The job of the public official is to make the right decision when purchasing equipment. It requires an evaluation of the product and its return to the agency. LCC provides a total picture of what the product is worth to the buyer over the ownership and reduces the risks of making a poor decision, because making the wrong decision could be very costly in terms of unexpected expenses in repairs and downtime. Making the wrong decision also can create havoc with the agency's budget and cash flow. The manufacturer also has to make the right decisions in developing product quality. The wrong decision for the manufacturer can be very costly in terms of lost sales. The goal of any manufacturer should be to provide customer satisfaction through performance and value over the life of ownership. It is up to the buyer to demand what that level of value should be.