

COUNCIL ACTION FORM

SUBJECT: FLEET REPLACEMENT PROGRAM – TWO (2) WHEEL LOADERS

BACKGROUND:

Two rubber tired wheel loaders are scheduled for replacement in FY 10/11. One is for the Resource Recovery Plant in August 2010, and one is for the Power Plant's coal yard operation in December 2010. Both machines are the same except for the types of buckets, tires, and special guarding required.

Bids for these new machines were received as follows:

Wheel Loader for Resource Recovery Plant:

<u>Bidder</u>	<u>Machine</u>	<u>Base Bid</u>	<u>Buy Back After 2 Years</u>	<u>Net Cost</u>
Murphy	JD 624K	\$132,500	\$89,000	\$ 43,500
Titan	Case 721E	\$137,200	\$75,000	\$ 62,200
Ziegler	CAT 938H	\$145,241	\$80,000	\$ 65,241
Ziegler	CAT 928HZ	\$128,206	\$60,000	\$ 68,206
SVK	Volvo L90F	\$175,113	\$90,113	\$ 85,000
Mid-Country	Kawasaki 70ZV-2	\$172,500	\$ 0	\$172,500

The fleet replacement fund will have \$229,028 in accumulated funds by August for purchase of this machine.

Wheel Loader for the Coal Yard Operation:

<u>Bidder</u>	<u>Machine</u>	<u>Base Bid</u>	<u>Buy Back After 4 Years</u>	<u>Net Cost</u>
Murphy	JD 624K	\$128,000	\$89,000	\$ 39,000
Ziegler	CAT 938H	\$141,096	\$80,000	\$ 61,096
Ziegler	CAT 928HZ	\$124,138	\$60,000	\$ 64,138
Rueter's	Hyundai HL757-7A	\$138,600	\$70,200	\$ 68,400
Titan	Case 721E	\$138,500	\$60,000	\$ 78,500
SVK	Volvo L90F	\$168,836	\$75,000	\$ 93,836
Mid-Country	Kawasaki 70ZV-2	\$174,200	\$ 0	\$174,200

The fleet replacement fund will have \$181,167 in accumulated funds by December for the purchase of this machine.

These bids were evaluated to determine the net low evaluated cost by using the cost of the machine, less the guaranteed buy back, plus the projected cost of the fuel, over the

life of each machine. Fuel consumption is based on each machine's published fuel efficiency rate. The evaluation is attached for reference.

Wheel Loader for Resource Recovery Plant:

The net evaluated low bid purchase cost for the Resource Recovery Plant unit is the John Deere 624K. However, this machine is not the most fuel efficient model.

The wheel loader bid with the best fuel efficiency for Resource Recovery is the Case 721E. The Case will use 5,400 gallons less fuel over its 2 year life cycle than the John Deere. That is 34% less fuel than the John Deere loader, and saves 57 tons of carbon emissions compared to that machine. The Case will cost \$4,700 more to purchase and will return \$14,000 less in buy back than the John Deere, for an extra purchase cost of \$18,700. The cost savings on fuel over 2 years will be \$13,500.

When this extra cost and savings are combined, the City would experience \$5,200 in total added cost for the Case wheel loader compared to the John Deere machine over 2 years of service and an additional reduction of 57 tons of carbon emissions.

The current machine being replaced is a Volvo L90 with fuel efficiency rated at 2.4 GPH. Replacing the existing Volvo with a new John Deere (which is rated at 3.2 GPH) would *increase* our carbon footprint by 43 tons of CO₂, or by 33%. Conversely, replacing the existing Volvo with a new Case (that is rated at 2.12 GPH) would *decrease* our carbon footprint by 14 tons of CO₂, or almost 12%.

Wheel Loader for the Coal Yard Operation:

The net evaluated low bid purchase cost for the Coal Yard unit also is the John Deere 624K. However, this machine again is not the most fuel efficient model.

The acceptable wheel loader bid with the best fuel efficiency and the net low bid for the Coal yard Operation is the CAT 938H. This CAT will use 3,750 gallons less fuel over its 4 year life cycle than the John Deere. That is 23% less, and saves 40 tons of carbon emissions. The CAT will cost \$13,096 more to purchase and will return \$9,000 less in buy back than the John Deere, for a total of \$22,096 in additional purchase cost. The cost savings on fuel over 4 years will be \$9,375. The net expense to the City is \$12,721 of total extra cost for the CAT compared to the John Deere over 4 years of service.

The current machine being replaced is also a John Deere wheel loader. There is very little difference between the fuel efficiency of the current Deere and the new Deere 624K.

ALTERNATIVES:

1. Award this bid at the net low purchase cost evaluated bid to Murphy Tractor & Equipment, Des Moines, IA, for two wheel loaders as follows: One John Deere

624K wheel loader as specified for Resource Recovery plant for \$132,500, and approve the buy back guarantee of \$89,000 for this machine after two 2 years; and one John Deere 624K wheel loader as specified for the Coal Yard Operation for \$128,000, and approve the buy back guarantee of \$89,000 for this machine after four 4 years.

The total amount for this award would be \$260,500 for the purchase of both wheel loaders, with guaranteed buy backs totaling \$178,000. This alternative will result in a \$82,500 net purchase cost to the City.

2. Award this bid for acceptable machines with the best fuel efficiency and the net low evaluated cost as follows:
 - a. to Titan Machinery, Ankeny, IA, for one (1) Case 721E-Z bar wheel loader at a purchase cost of \$137,200, and approve the buy back guarantee of \$75,000 in two (2) years.
 - b. to Ziegler, Inc., Altoona, IA, for one (1) CAT 938H wheel loader at a purchase cost of \$141,096, and approve the buy back guarantee of \$80,000 in four (4) years.

The total amount of this award would be \$278,296, with guaranteed buy backs totaling \$155,000. This alternative will result in a \$123,296 net purchase cost to the City, with a savings of 97 tons of carbon emissions over the expected life of the vehicles.

3. Award this bid for one machine for the best fuel efficiency and one machine for the net low cost as follows:
 - a. to Titan Machinery, Ankeny, IA, for one (1) Case 721E-Z bar wheel loader, as the machine with the best fuel efficiency and the best price, at a purchase cost of \$137,200, and approve the buy back guarantee of \$75,000 in two (2) years. This machine would be operated at the Resource Recovery Plant; plus
 - b. to Murphy Tractor, Altoona, IA, for one (1) John Deere 624 wheel loader, as the net low cost machine, at a purchase cost of \$128,000, and approve the buy back guarantee of \$89,000 in four (4) years. This machine would be operated at the Power Plant for coal operations.

The total amount of this award would be \$265,200, with guaranteed buy backs totaling \$164,000. This alternative will result in a \$101,200 net purchase cost to the City, with a savings of 14 tons of carbon emissions over the expected life of the vehicles.

MANAGER'S RECOMMENDED ACTION:

Staff from Fleet Services, Public Works, and Electric Services have reviewed the bids for specification compliance and have determined that all the machines bid, except the CAT 928HZ, are acceptable machines for these operations. **However, the bids received for these loaders present an interesting dilemma, since the City will not be able to maximize carbon reduction if it purchases the machines with the lowest dollar cost.** The loaders described under Alternative #1 have the lowest net evaluated dollar cost, which is certainly attractive in these difficult economic times. On the other hand, Council has set a goal of reducing the City's carbon footprint by 15% by 2014, which would make a case for Alternative #2.

On balance, if Council's overriding goal is to reduce the City's carbon footprint, then Alternative #2 should be selected. If lowest net evaluated dollar cost is most important, then Alternative #1 should be selected. If an option that somewhat balances those two goals is desired, then Alternative #3 may be selected.

Absent any further direction from Council, and given the Council's previous commitment to carbon reduction, it is the recommendation of the City Manager that the City Council adopt Alternative #2. This action will award the purchase of a Case 721E-Z bar wheel loader to Titan Machinery, at a purchase cost of \$137,200, and will award the purchase of a CAT 938H wheel loader to Ziegler, Inc., at a purchase cost of \$141,096. The total bid award will be \$278,296, with guaranteed buy backs totaling \$155,000.

However, should Council desire to strike a different balance between dollar cost and carbon reduction, either of the other alternatives will also satisfy the departments' operational needs.