CITY OF **VANCOUVER**

ADMINISTRATIVE REPORT

Report Date: June 23, 2005
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RTS No.: 05268
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Meeting Date: July 12, 2005

TO: Vancouver City Council

FROM: General Manager of Engineering Services
Manager, Materials Management

SUBJECT: Authority to Contract with Sensus Metering Systems Inc.- RFP PS04005 Supply of Water Meter Reading Equipment and Software.

RECOMMENDATION

A. *THAT subject to the conditions set out in Recommendations B, C, D, and E Council authorize a contract with Sensus Metering Systems Inc. for the purchase of six handheld data capture units, a vehicle mounted data collector, 3000 radio transceiver units and the required software to support the data capturing equipment. The purchase cost is $466,784.00 exclusive of GST and PST.*

B. *THAT the Director of Legal Services be authorized to execute and deliver on behalf of the City all legal documents required to implement Recommendation A.*

C. *THAT all such legal documents be on terms and conditions satisfactory to the General Manager of Engineering Services, Manager of Materials Management and the Director of Legal Services.*

D. *THAT no legal rights or obligations will be created by Council's adoption of recommendations A, B, and C above unless and until such legal documents are executed and delivered by the Director of Legal Services.*

E. *THAT funding for the purchase described in recommendation A be provided from Waterworks Capital Plan (2003-2005), Replacement of Aging Meters.*

GENERAL MANAGER'S COMMENTS

The General Manager of Engineering Services recommends approval of A through E.

CITY MANAGER'S COMMENTS

The City Manager recommends approval of A through E.

COUNCIL POLICY The policy of Council is to secure contracts for the purchase of equipment, supplies, and services that will give the best value based on quality, service and price.

Contracts with a value over $300,000 are referred to Council.

BACKGROUND

The Waterworks Capital Plan includes an ongoing program to replace its 14,000 water meters as they reach the end of their service life. The 2003-2005 Capital Plan included funding to accelerate the conversion of the last remaining meters incompatible with automated reading in order to fully realize the benefits of the upgrades that had been started in 1997. It was intended that this conversion coincide with the introduction of a new utility billing system.

Automated meter reading requires the installation of electronic touch pads on every meter. A touch pad is a device that converts the water consumption reading into digital reading. The conversion of meters is now complete. The purchase request in this report is for the remaining equipment required to capture and store the data and finally realise the full benefits of the technology.

The equipment includes handheld data capture devices which automatically collect and store the information from the meter. Using a docking station, the data is transferred at the end of each day to the City's computer network to the billing staff. This automated meter reading system, which interfaces with the Tempest utility billing system will greatly improve billing functionality, accuracy and efficiency.

Under the recommended purchase, the system includes a mobile data collection unit and low power radio transmitters that are used to read meter data remotely. The City currently has approximately 3,000 sites that are not easily accessible or in unsafe areas and remote data capture would improve efficiency and the safety of employees.

DISCUSSION

On January 29, 2004 the City issued a Request for Proposal (RFP PS04005) for the Supply of Water Meter Reading Equipment and Software. In addition to notifying incumbent suppliers to the City, the RFP was advertised in the Vancouver Sun and on the City's and BC Purchasing Commission's websites. Six proposals were received.

The evaluation process consisted of two stages: The first was to determine which proposals met the requirements as set out in the RFP; the second was to conduct a six month pilot test in the field to evaluate the operational capacity of the equipment. Of the original six submissions, two were found to meet the requirements of the RFP and have references that indicated that they should continue into the pilot testing program.

The two proponents selected for the pilot project were Sensus Metering Systems and Elster Metering. The pilot project was conducted during the fall and winter of 2004/2005. Each manufacturer supplied the City with 60 of their transmitter units as well as the handheld devices, car transmitter and accessories. Sixty (60) installations were completed, with half located inside buildings and the other half located in meter boxes on the city street. During the pilot project, the following areas were evaluated: ease of installation, reliability of reading, cost of multiple meter installations, supplier support and ease of use for field staff.

The two suppliers provided similar equipment as outlined in the RFP.

In reviewing the proposals, it is noted that the initial purchase of the Sensus equipment is more expensive than the Elster equipment. However, over the estimated fifteen year life cycle of the equipment, staff has estimated that the Sensus equipment has fewer support costs and therefore is more economical over the long term.

	SENSUS	LIFE CYCLE	ELSTER	LIFE CYCLE
Purchase Price		$454,000		$335,000
Additional Accessory Costs (2300 ERT pit cables and 3 programmers)				$34,848
Software Integration Costs	included		$2000 included could be additional $3000	$0 - $3000
Software Support/Licence Fees	$2555/yr	$30,660	6600/yr	$79,200
Estimated yearly software maintenance and data management	$3840/year	$57,000	$7680/year	$114,000
Total Life Cycle Cost		$542,000		$566,000

The Sensus equipment also provides the following benefits:

- Reduced hardware requirements – the Sensus system requires two types of transmitters. This reduces confusion for the installers and requires less stocked material. This will save the City the cost of stocked materials and reduces the chance of having to redo installations. The Elster system requires eight different transmitters, all with the same appearance. It is strongly believed that this can lead to the wrong transmitter being deployed, requiring 1.5 h of crew time to rectify.

- The Sensus system can use one transmitter to read two meters, saving money on most dual meter installations.
- Crews found the Sensus equipment easier to install.
- During the initial deployment of the equipment, crews spent significantly more time trouble-shooting Elster equipment than Sensus equipment.
- The Sensus software will be easier to integrate with the Tempest billing system, requiring significantly less programming time and providing easier data management and maintenance.
- The Elster system requires that the route be reprogrammed every time that a new meter is added to the system, requiring programming time for the meter readers. The Sensus system is more flexible, allowing for one off reads and immediate reading of new meters. Routes can then be updated with more convenience.
- The Sensus equipment provided stronger reading signals, requiring fewer return reads.
- The Sensus handheld unit was more ergonomic and was simpler to use, saving time in the field for the production of service and error reports. It also provided faster reading times.

References from other water utilities using the Sensus equipment proved to be excellent.

As a result of extensive reviews of the competing products, the reference checks and the results of the six (6) month pilot project, staff recommends that the City seek to enter into a contract with Sensus for the supply of Automated Meter Reading equipment, as outlined in RFP No. PS04005 be awarded to Sensus Metering Systems.

Installation would begin within 6-8 weeks of a contract being executed. The full use of the system will be scheduled to coincide with the implementation of the new Tempest Utility Billing System scheduled for the second quarter of 2006.

FINANCIAL IMPLICATIONS

This RFP proposes the purchase of:

- 6 handheld data capture units for - $54,540
- 1 Mobile, vehicle mounted data collection unit - $33,330
- 3,000 Radio Transceiver Units for - $326,250
- The balance of the purchase includes training costs, software maintenance fees, accessories

Funds for the purchase of the equipment as well as installation will be provided from the Waterworks Capital Plan (2003-2005), Replacement of Aging Meters. The value of the recommended award is within the approved budget.

There is no anticipated change to the 2006 Waterworks Operating Budget.

CONCLUSION

The recommendation to authorize a contract with Sensus Metering Systems is deemed to provide best value for the City over the term of the contract and the life cycle of the equipment.

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