January 15, 2014

Waterworks Utility Fund Review

Background

The City's utility and public works systems (water, sewer, solid waste, neighbourhood energy) provide essential services to Vancouver's citizens. The City's water system is comprised of approximately 1,450km of water mains and supplies water to over 100,00 service connections and 6,000 fire hydrants. It has a replacement value of approximately $2 billion.

The waterworks distribution system of the City of Vancouver operates as a Utility and its operating costs, debt charges and cost of water purchased from the Metro Vancouver supply system are recovered through revenues collected from water users and debt financing.

In 2012, the City purchased and delivered approximately 112,000 cubic metres of water from metro Vancouver at a total cost of $66.8 million; bulk water purchases make up approximately 65% of all waterworks expenditures.

Until recently it has been City practice to finance 100% of the Water Utility capital program through debt. Debt is generally amortized over 10 years, and the annual debt servicing charge (interest and principal) is funded from utility fees. Debt amortization increases overall cost for ongoing reconstruction over the long term as approximately $3 to $4 million of interest (per year) is payable on the outstanding debt.

On November 29, 2011, City Council approved the waterworks utility's strategy of transitioning to a "Pay-As-You-Go" (PAYG) capital financing process over a 10-year period.

A transition from debt financing of new projects will take about eight years. By year eight, the majority of the Utility's capital would be funded through current year revenues. In years 9-20, the outstanding debt will be retired lowering total capital costs until eventually all ongoing capital programs are funded from water utility revenue at a lower ongoing cost than with debt-financing.

The 2013 budget marks the second year of this strategy. Approximately, $7.5 million of capital work was transitioned from debt financing to PAYG. A two percent rate premium has been budgeted over the next seven years and by year eight, the rate premium will be reviewed and the total cost of capital will reduce until all of the old debt has been retired. The outcome will be approximately a $4 million annual (2011 dollars) reduction in borrowing costs for the Waterworks Utility.

The 2013 Annual Review of Water Rates by Engineering identified the following key priorities/objectives in their long range plan:

- Provide clean, safe, secure and accessible drinking water;
- Support the sustainable use of water resources, as a way of living within our means in perpetuity;
- Be prepared for emergencies;
- Manage assets proactively;
- Operate a fully cost recovered utility ensuring best value for customers and citizens;
- Provide excellent customer service; and
- Support innovation in the way we do our work.

Operationally, Waterworks Branch implemented a number of initiatives to increase its efficiency such as establishing satellite work staging areas to reduce activation time and fuel usage; scheduling work geographically to increase productivity in meter testing; and having Street crews apply permanent asphalt patching over water utility cuts thus reducing the extra step of a temporary patch followed by a permanent repair.

Scope

This review was initiated to provide independent assurance that comprehensive and rigorous methodology was applied in developing the new Waterworks Capital funding model. The review also assessed the adequacy and effectiveness of existing internal controls and efficiency of business processes and asset management, and the extent of compliance with applicable policies and procedures.

Review work focused specifically on waterworks capital funds and operations including:

- Annual water works rate review documents
- Migration from debt financing to PAYG capital funding model
- Accounting of Waterworks procedures, fund schedules including investment, maintenance and retirement;
- Capital assets maintenance and replacements; and
- Applicable Vancouver Charter and individual debenture bylaws.

Conclusion

The PAYG model funding analysis was found to be comprehensive and the transition carried out effectively. However, it was found that the annual financial statement overstated certain asset costs. Financial Services has since adjusted the financial statements to reflect the correct asset valuation. In addition close monitoring and analysis of infrastructure condition will be required to balance recapitalization costs against risk of failure.

Internal Audit staff provided a number of suggestions for improvements such as the need to review the water meter management strategy to agree on replacement and funding principles for consideration in future budgets as well as establishing an appropriate benchmark strategy to achieve the optimal balance between repair and replacement of leaking connections in residential copper service lines at end of life.

Management has agreed and since committed to address these issues to assure the public's continued confidence in the water utility.