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TRANSMISSION OPERATIONS OPTIMIZATION CO-OPERATIVE STUDY WITH CITY OF TORONTO

The Transportation and Works Committee recommends the adoption of the recommendations contained in the following report, December 17, 2003, from the Commissioner of Transportation and Works:

1. RECOMMENDATION

It is recommended that:

1. The following report be received for information by the Transportation and Works Committee and Regional Council.

2. PURPOSE

This report is submitted to inform Transportation and Works Committee and Regional Council of the current status of Phase 1 of the Transmission Operations Optimizer Project and to provide an update on the consultant as determined through the selection process conducted by the City of Toronto.

3. BACKGROUND

As part of the City of Toronto's \$150 Million Phase II Water and Wastewater Best Practices Program, the City has initiated a number of projects to improve efficiencies in process control throughout the water and wastewater service areas. One of the major initiatives is the Transmission Operations Optimizer (TOO) project. The objective of this project is to minimize operating costs associated with water pumping and transmission through the use of software designed to optimize energy consumption while continuing to ensure water quantity and quality objectives are maintained.

The City of Toronto requested the Region consider partnering on this initiative and staff recognized the benefits in participating on a partnership basis. Regional Council authorized the joint partnership arrangement for this project on March 28, 2002, as per Clause 6 of Report No. 3 of the Transportation and Works Committee. As with previous joint projects with the City, consultant contracts are with the City. York Region pays its agreed share of the project to the City of Toronto.

A Request for Proposal to design and implement the software system was issued for the project in June 2002. Only one valid submission was received. The fee proposal was significantly higher than the project budget and it was decided that a re-evaluation of the project was necessary.

The project team proposed dividing the project into two Phases. Phase 1 would develop the technical requirements of the software system and Phase 2 would be the selection and implementation of the software.

Proposals for Phase 1 were received in October 2003.

4. ANALYSIS AND OPTIONS

A revised Request for Proposal was issued in September 2003 and submissions were received from the following firms:

1. Delcan Corporation.
2. Earth Tech Canada Inc.
3. MacViro Consultants Inc.

The proposals were evaluated by a joint team consisting of City of Toronto and Regional staff. The process was monitored by the City of Toronto in accordance with their purchasing by-law requirements. York Region participated in the technical evaluations.

The process resulted in the City of Toronto recommending an award to MacViro Consultants.

5. FINANCIAL IMPLICATIONS

5.1 Phase 1 Fee Submission

The Phase 1 fee is \$1.28 million plus GST of which approximately 50% is attributable to York Region. There is sufficient funding available in the draft 2004 capital budget.

5.2 Operational Energy Savings

One of the significant benefits expected from this project is energy savings and how they relate to operating in a deregulated energy market. The goal of this project is to be able to effectively manage energy consumption patterns in a deregulated energy market to ensure that our system energy costs are minimized while maintaining quantity and quality objectives.

The energy market was deregulated for eight months starting in May 2002. Rates were subsequently frozen at 4.3 cents/kWh in December 2002 by the Provincial government with the intention of maintaining its rate until 2006. This decision significantly reduced the benefits of the project considering that energy costs would be stable until 2006.

Recent legislation proposed by the new Liberal Government will result in an increase in Hydro rates in April 2004 to 4.7 cents/kWh and peak rates are also expected to be variable which will have an immediate impact on the Region's energy costs.

It appears that the energy market controls currently in place are not sustainable and continued effort in this project is important to properly manage energy consumption.

6. LOCAL MUNICIPAL IMPACT

This project will have a number of benefits to local municipalities served by the City of Toronto supply system, including enhanced water quality management, water quantity management and lower Regional operating costs.

7. CONCLUSION

Participation in the City of Toronto Transmission Operations Optimizer project will enable York Region to better serve the local municipal customers by minimizing energy costs while maintaining water quality and quantity. The additional benefits of collaborating with the City of Toronto are improved water system integration and reduced total project costs.

The City of Toronto has recommended a contract award to MacViro Consultants. The Regions share of the Phase 1 project cost is \$675,000 plus GST. This amount is provided for in the Region's 2004 capital budget.

The Senior Management Group has reviewed this report.