

**2. WATER PURIFICATION PLANTS
STANDBY POWER REPLACEMENT PROGRAM
PHASE II - ENGINEERING DESIGN -
CONTRACT ETL00-3078**

COMMITTEE RECOMMENDATION

That Council approve the award of Contract ETL00-3078 to CH2M Gore and Storrie Ltd., Ottawa, for engineering pre-design and detailed design for the proposed modifications to the Lemieux Island and Britannia Water Purification Plant standby power systems, for a total contract provision of \$1,373,649.

DOCUMENTATION

1. Environment and Transportation Deputy Commissioner's report dated 26 Sep 00 is immediately attached.
2. Extract of Draft Corporate Services and Economic Development Committee Minute, 17 Oct 00, immediately follows the report and includes a record of the vote.

REGION OF OTTAWA-CARLETON
RÉGION D'OTTAWA-CARLETON

REPORT
RAPPORT

Our File/N/Réf. **50 19-00-0012-V**
Your File/V/Réf.

DATE 26 September 2000

TO/DEST. Co-ordinator
Corporate Services and Economic Development Committee

FROM/EXP. Deputy Commissioner
Environment and Transportation Department

SUBJECT/OBJET **WATER PURIFICATION PLANTS
STANDBY POWER REPLACEMENT PROGRAM
PHASE II - ENGINEERING DESIGN -
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DEPARTMENTAL RECOMMENDATION

That the Corporate Services and Economic Development Committee and Council approve the award of Contract ETL00-3078 to CH2M Gore and Storrie Ltd., Ottawa, for engineering pre - design and detailed design for the proposed modifications to the Lemieux Island and Britannia Water Purification Plant standby power systems, for a total contract provision of \$1,373,649.

RATIONALE

The Lemieux Island and Britannia Water Purification Plants operate standby power systems which are required to ensure the reliability of the water production processes in the event of a power failure.

They are also used for hydro peak shaving as required by our Hydro Power Agreement with Ottawa Hydro. This agreement requires that the Region of Ottawa-Carleton utilize their generators to reduce power demand during Ottawa Hydro's peak demand period. We are required to do this at their request and this can happen up to twice a day for as many as twenty days a month. The benefit of the agreement is that from 1995-1999, the Region of Ottawa-Carleton's savings in hydro consumption has amounted to approximately \$2,300,000.

The study completed in 1999 concluded that in order to continue taking advantage of these savings through peak shaving as well as increasing the stand-by capacity, ageing equipment would have to be replaced and in some cases upgraded to more current standards.

The existing diesel generator equipment at the Britannia facility is over 35 years old and parts are extremely scarce and in some cases are unavailable. The units are not as efficient as newer technologies and they also have high exhaust emissions.

The diesel generators at the Lemieux Island plant are over 20 years old and are now too small for the loads being placed on them. As a result of this additional stress, both units require major overhauls in about one third of the time normally expected (5,000-9,000 hours vs. 15,000 hours).

In addition, this project will provide for improvements to the generator/emergency power transfer system, switchgear and monitoring equipment. These modifications will help to prevent the fatigue, stress and failures to electrical motors caused by the constant switching to and from generator power as well as allowing for appropriate monitoring.

The work to be undertaken as part of this assignment will include but not be limited to conducting a detailed review of the original study to determine the effects of Ontario Hydro Deregulation, changes in regulatory issues (emissions) and sequencing of the work to ensure no disruption to water production and distribution capacities. Once this is completed, work will begin on the pre-design component of the work. This will include any required Environmental Assessment requirements, a Value Engineering workshop, development of design concepts and budgets, etc. The detailed design component of the work will include pre-selection and pre-purchasing of key pieces of equipment, finalization of process narratives, pre-selection of qualified contractors, preparation of tender ready drawings and specifications for each of the construction packages, finalization of budgets, tender review and evaluation as well as all other activities required to take us to the construction ready stage.

With the assistance of Supply Management Division, a Request for Qualifications (RFQ) was posted on the MERX bid distribution system on 13 July 2000. A total of eight submissions were received by the closing date of 10 August 2000. The qualification submissions were reviewed and evaluated by a selection committee comprised of Regional staff from Engineering Services, Water Division and the Supply Management Division. The selection committee evaluated each submission according to a ranking system outlined in the RFQ resulting in Stantec and CH2M Gore & Storrie Ltd. being shortlisted for the Request for Proposal stage of work. They were subsequently invited to submit detailed proposals on 14 September 2000 and participate in interviews to present their proposals and respond to questions from the selection committee.

Both firms submitted comprehensive proposals that were reviewed by the project team. Each proposal received was evaluated by the selection committee on the basis of company experience, qualifications and experience of key team members, their overall approach to the project, their understanding of the objectives of the workplan, as well as their availability, ability to conduct the work and cost.

Based on demonstrated experience in similar work, staff to be assigned to the project, level of effort and ability to deliver a final product, the firm with the highest overall ranking was CH2M Gore & Storrie Ltd. They provided an experienced and knowledgeable project team that staff feel are the most qualified and will give the Region the best value. It is therefore recommended that Contract ETL00-3078 be awarded to CH2M Gore & Storrie Ltd. in the amount of \$1,373,649. This includes a provision for variations in the amount of \$110,000 and G.S.T. in the amount of \$89,865.00

CONSULTATION

Public consultation will be undertaken as part of the Class Environmental Assessment component of this assignment.

EXPENDITURE JUSTIFICATION

This work is required to ensure the reliability of the water production processes at the Region of Ottawa-Carleton's Water Purification Plants and to ensure the ability to achieve the peak-sharing reductions outlined in our contract with Ottawa Hydro.

FINANCIAL STATEMENT AND APPROVAL

\$

Approved Budget to Date	12,687,945
Total Paid and Committed	<u>(255,237)</u>
Balance Available	12,432,708
THIS REQUEST	<u>(1,373,649)</u>
Balance Remaining	<u>11,059,059</u>

Funds are available in the 2000 Capital Budget, Order No. 900162, Water Purification Plants - Standby Power System Replacement Program, (Reference page 326), Purchase Requisition No. 10076836.

*Approved by D. Shannon on behalf of
N.B. Schepers, P.Eng.*

SF/jw

SUPPLY MANAGEMENT DIVISION

I concur,

*G. Ford on behalf of
Lloyd Russell*

Extract of Draft Minute
Corporate Services and
Economic Development Committee
17 October 2000

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- Environment and Transportation Deputy Commissioner's report dated 26 Sep 00

Councillor Cantin referenced a Property Services report considered by Committee in February 2000 with respect to the replacement of generators at 111 Lisgar, in addition to other locations. He stated the report had been deferred until August, however, has since not returned to Committee. The Councillor inquired if the generation capacity at 111 Lisgar was sufficient to replace the aging generators at the purification plants. In addition, he wondered if there was sufficient generator power at 111 Lisgar, noting the consequences should there be a power failure.

J. Miller, Director, Engineering Division, reported the generators required for the purification plants were intended to be standby and duty, whereas the generators for 111 Lisgar were only for standby and not for full duty operation. Mr. Miller did not believe there was a match; however, he agreed to review the option. In addition, Mr. Miller stated the generators at the purification plants were obsolete and must be replaced.

With respect to the generators at 111 Lisgar, Mr. Miller deferred the question to Property Services. M.J. Woollam, A/Chief Administrative Officer, stated the Property Services Director was absent; however, she agreed to obtain the information prior to Council.

Speaking to the subject ETD report, Councillor Cantin inquired if the cost was for the study alone. Mr. Miller reported the total program was in excess of \$12 million. He explained a feasibility study recommended it was critical to proceed at this time. Mr. Miller added the program had been postponed for two years earlier due to the SCADA implementation.

Councillor van den Ham inquired about the requested expenditure and if it was for study alone or purchasing equipment. Mr. Miller reviewed the process and compared the program to that for the Robert O. Pickard Centre gas utilization. He pointed out the report dealt with both water treatment plants (Lemieux and Britannia), and the nature of the work did require a number of contracts.

Extract of Draft Minute
Corporate Services and
Economic Development Committee
17 October 2000

Councillor van den Ham referenced the statement that public consultation would be undertaken as part of the class environmental assessment component. He questioned the necessity, noting it was to replace standby power. In response, Mr. Miller confirmed it was a requirement of the process as outlined in the class environmental assessment document. He expected there might be concerns with respect to emissions; however, he stated the new equipment was much cleaner and quieter.

The Committee then considered the staff report.

That the Corporate Services and Economic Development Committee and Council approve the award of Contract ETL00-3078 to CH2M Gore and Storrie Ltd., Ottawa, for engineering pre-design and detailed design for the proposed modifications to the Lemieux Island and Britannia Water Purification Plant standby power systems, for a total contract provision of \$1,373,649.

CARRIED