

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON AUGUST 12, 2019
FROM:	KELLY SCHERR, P. ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER
SUBJECT:	CONTRACT AWARD: TENDER T19-36 GREENWAY ORGANIC RANKINE CYCLE ENGINE INSTALLATION

RECOMMENDATION

That on the recommendation of the Managing Director, Environmental and Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to the award of contract for the installation of the Organic Rankine Cycle Engine system:

- (a) the bid submitted by JMR Electric Ltd. at its tendered price of \$11,039,340.00, excluding HST in response to Tender 19-36, **BE ACCEPTED**; it being noted that the bid submitted by JMR Electric Ltd. was the lowest of four bids received and meets the City's specifications and requirements in all areas;
- (b) the financing for these projects **BE APPROVED** as set out in the Sources of Financing Report attached, hereto, as Appendix 'A';
- (c) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this project;
- (d) the approval, given herein, **BE CONDITIONAL** upon the Corporation entering into formal contracts relating to this tender; and
- (e) the Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations.

PREVIOUS REPORTS PERTINENT TO THIS MATTER
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Civic Works Committee, May 14, 2019, Item 2.10 – Greenway Wastewater Treatment Plant Organic Rankine Cycle Equipment Installation Budget Allocation.

Civic Works Committee, July 17, 2018, Item 2.6 – Clean Water and Wastewater Fund Project Budget Adjustments.

Civic Works Committee, June 7, 2017, Item 11 – Clean Water and Wastewater Fund – Purchase of Major Organic Rankine Cycle System Components for Power Generations at the Greenway Wastewater Treatment Plant.

Civic Works Committee, November 29, 2016, Item 11 – Appointment of Consultants – Clean Water and Wastewater Fund Projects.

Civic Works Committee, October 4, 2016, Item 8 – Infrastructure Canada Phase 1 Project Requests – Clean Water and Wastewater Fund Projects.

Civic Works Committee, July 18, 2016, Item 5 – Electricity Generation from Waste Heat at the Greenway Wastewater Treatment Plant-Update.

Civic Works Committee, September 9, 2013, Item 11 – Biosolids Disposal Assessment.

Civic Works Committee, February 25, 2013 – Timeline for major Environmental and Engineering Reports.

Civic Works Committee, May 14, 2012 – Renewable Energy Production from the Greenway Fluidized Bed Incinerator.

2019-2023 STRATEGIC PLAN

Strategic Plan

This project supports the 2019-2023 Strategic Plan through the following: Building a Sustainable City, Build infrastructure to support future development and protect the environment.

Community Energy Action Plan - Renewable Energy Projects

The reuse of waste heat and bioenergy production are priorities identified in London's 2014-2018 Community Energy Action Plan. In addition, the primary goal of the City's Corporate Energy Conservation and Demand Management Plan is to reduce the corporation's annual energy use by 10% or 30 million equivalent kilowatt-hours (ekWh) per year from 2014 levels by 2020. The Greenway Organic Rankine Cycle initiative is identified as a renewable energy project in the Corporate Energy Conservation and Demand Management Plan and will contribute 12.5% (3.75 million ekWh/year) of the Plan's target energy savings.

BACKGROUND

Purpose

The purpose of this report is to seek Council approval for award of a construction contract for the Greenway Wastewater Treatment Plant Organic Rankine Cycle system installation.

Context

Previous reports to Council have requested and received approval to purchase and tender the installation of technology that can convert waste heat from the Greenway Incinerator into electrical energy.

The purchase of the equipment was previously made under the Clean Water and Wastewater Fund (CWWF), whereby the City received funding from the federal and provincial governments in the amount of 75% of the purchase price. The equipment has arrived in London.

The installation contract was approved for a one time funding of \$4,500,000 through the Federal Gas Tax, and will also be eligible for an incentive of up to \$730,000 from the Independent Electricity System Operator once operational.

DISCUSSION

As described in previous reports, the operation of the Organic Rankine Cycle engine is expected to generate a savings of \$600,000 per year in electrical costs while reducing grid electrical consumption at Greenway by over 3.75 GWh per year. Previous reports have sought and obtained Council approval to purchase the equipment and to allocate

the funds necessary to install the energy from waste heat package.

Tender Process

In consideration of the specialized nature of the installation contract, a pre-qualification process was undertaken for general contractors, as well as for electrical and mechanical sub-contractors. There were five pre-qualified general contractors that were invited to submit tenders in response to Request for Tender T19-36. These general contractors were required to utilize the services of one of the pre-qualified sub-contractors for the applicable trades.

Tender Summaries

Tenders in response to Request for Tender T19-36 were opened on July 9, 2019. Four (4) general contractors submitted tender prices as listed below, excluding HST.

CONTRACTOR		TENDER PRICE SUBMITTED
1.	JMR Electric Ltd.	\$11,039,340
2.	K&L Construction	\$11,330,100
3.	Stone Town Construction Limited	\$11,832,399
4.	AllTrade Industrial Contractors Inc.	\$14,964,322

The tender estimate just prior to tender opening was \$9,800,000, including \$800,000 in contingency. A portion of the works contemplated under this contract relate to the renewal of capital assets associated with existing incinerator systems; all work can be covered within existing capital accounts. The difference between the pre-tender estimate and final tender price relates mainly to additional complexity and scope and an escalation in equipment costs identified and captured through addenda during the tendering process.

CONCLUSIONS

JMR Electric Ltd has demonstrated the ability to complete the required construction works through the pre-qualification process and recently completed projects for the City of London. Award of T19-36 to JMR Electric Ltd. for the installation of the new Organic Rankine Cycle engine and associated works is recommended.

SUBMITTED BY:	CONCURRED BY:
GEORDIE GAULD DIVISION MANAGER WASTEWATER TREATMENT OPERATIONS	SCOTT MATHERS, P. ENG. DIRECTOR, WATER AND WASTEWATER
RECOMMENDED BY:	
KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER	

Attach: Appendix 'A' – Sources of Financing

- c.c. John Freeman
- Chris Ginty
- Geordie Gauld
- Alan Dunbar
- Jason Davies
- JMR Electric Ltd.