



## STAFF REPORT

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**DEPARTMENT:** Engineering

**CHAIR:** Councillor Pat File

**DATE:** May 19, 2015

**REPORT NO.:** ENG2015-009  
**Wastewater Treatment Centre Cogeneration System  
Detailed Engineering Study**

### **RECOMMENDATION:**

**That Council pass a by-law to enter into an agreement with R.H. Shergold & Associates to apply for funding and, if the funding application is successful, to carry out a detailed engineering study to investigate the feasibility of a combined heat and power Cogeneration System for the Wastewater Treatment Centre.**

### **BACKGROUND:**

The 2013 Energy Plan endorsed by Council calls for a goal of 1% energy savings per year. To meet that goal many possible projects have been investigated. In years past the notion of a Cogeneration System has been investigated to some degree. As part of the energy plan put together last year the Cogen was highlighted again as a significant potential energy saver for the Town.

### **ANALYSIS:**

In the past few months, staff has worked with Khaled Hamel of Cornerstone Energy who is working as an energy advisor to the Town through Midland Power Utility Corporation. Through Mr. Hamel's guidance, two (2) firms were contacted to carry out the specialized service of investigating the possible Cogeneration System. R.H. Shergold & Associates and Conestoga-Rovers & Associates were both contacted and staff had discussions with both firms. Ultimately, R.H. Shergold & Associates stepped forward to do some initial investigation, at their own cost, to determine at a very general level whether there was enough potential for a Cogeneration System to apply for funding of a detailed engineering study.

It is known in the industry that the SAVE-ON-ENERGY Study funding is not available if the applicant cannot demonstrate even a general potential that a Cogeneration System could work. After an initial general investigation R.H. Shergold & Associates is confident that the funding application will be successful. They have put the funding application together for us. R.H. Shergold & Associates does not begin the detailed engineering study work unless the funding application is successful.

### **SUSTAINABILITY:**

This recommendation is consistent with the following sustainability goals:

- Reduce consumption of natural resources: energy consumption
  - Develop alternative energy plans that consider using solar, wind, and geothermal sources.

### **CONCLUSIONS:**

This is a no risk way to advance a large, complex initiative with tremendous energy savings potential.

### **FINANCIAL IMPACT:**

The contract with R.H. Shergold & Associates would be a \$48,000 contract; however, this contract would only proceed if the funding application was successful. The funding would fully cover the \$48,000. There is no fee to apply for the funding.

Net cost to the Town is zero.

Prepared by: Jamie Galloway, Town Engineer  
Reviewed by: Carolyn Tripp, CAO


Attachments: Agreement with RH Shergold & Associates  
DES Application Form Midland WTC Cogen

**AGREEMENT BETWEEN**  
**RH Shergold & Associates**  
**(Hereafter referred to as "RHS")**  
**-And-**  
**Corporation of the Town of Midland**  
**(Hereafter referred to as "Client")**

- 1) It is agreed that RHS will make all applications on behalf of the Client for grants/ incentives for the engineering study (hereinafter referred to as the "Study or "Studies") of natural gas fired cogeneration on the properties listed on Appendix A.
- 2) RHS does not guarantee that the proposed study will be declared eligible by the Local Distribution Company ("LDC"). However, RHS will only submit studies that we feel are reasonably likely to be judged eligible for funding. RHS and their employees, consultants and agents will not be held liable if funding is not obtained, and the Client will not be held liable for any costs, charges or expense if funding by the LDC is not obtained to reimburse the Client in full, as referred to herein.
- 3) In the event that grant/rebate for the Study, in full, is not approved by the LDC, there will be no charge to the Client by RHS; including any and all time and material, or by any other parties.
- 4) RHS will only issue an invoice to the Client once:
  - The Client has received the LDC written approval, in the executed funding contract, stating that the Study costs will be reimbursed in full and within a reasonable period of time.
- 5) RHS will submit the Study to the LDC once RHS's invoice is paid by the Client and proof of payment exists. (Please note the funding cheque issued to the Client from the LDC is meant to be a reimbursement of Study costs in full)
- 6) The Client Agrees to pay RHS a fee based upon Appendix A, subject to the conditions for reimbursement in full as set out herein.
- 7) It is understood that the Client is under no obligation to proceed with the proposed cogeneration project analyzed in the study.
- 8) The Client will promptly notify RHS of any review or request for information from the LDC so that RHS has the ability to provide information or address any questions or concerns that may arise.
- 9) RHS agrees to hold in strict confidence any confidential information relating to the Client's business and affairs that may come to our knowledge as the result of providing these services. RHS agrees not to use it for its benefit or the benefit of any other person or entity. The only exceptions to this will be disclosure of information required to obtain funding.

Each party acknowledges that it understands the terms, and its rights and obligations under this Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the 6<sup>th</sup> day of May, 2015.

Per:   
RH Shergold & Associates  
TERRY HOGAN

Per: \_\_\_\_\_  
Gordon McKay, Mayor

Per: \_\_\_\_\_  
Andrea Fay, Dir. of Corporate Services/Clerk





Please note that an Application is considered to be completed and submitted only after a signed copy of the Application has been uploaded to iCon 2011 and the information and values recorded on the signed Application form are entered in the iCon 2011 database.

**DETAILED ENGINEERING STUDY FUNDING APPLICATION**

<b>DETAILED ENGINEERING STUDY NAME:</b>	Town of Midland WWTC Cogen DES	<b>For LDC Use only</b>
		Identification #: <span style="background-color: yellow;"></span>
		KAM: <span style="background-color: yellow;"></span>

<b>PROJECT NAME:</b>	Midland WWTC Cogen DES
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**CORPORATE INFORMATION**

<b>Name of Company:</b>	The Corporation of the Town of Midland	
<b>Applicant's name (if different):</b>		
<b>Corporate relationship between the Company and the Applicant:</b>		
<b>Please indicate whether the Company owns or leases the Property:</b>	<input checked="" type="checkbox"/> Owns <input type="checkbox"/> Leases	
<b>If there has been any change to corporate status since the first application to the Program please identify it here:</b>		

**APPLICANT INFORMATION**

<b>Applicant Information:</b>		<b>Contact Information:</b>	
<b>Legal Name of Applicant:</b>	The Corporation of the Town of Midland	<b>Primary Contact Name:</b>	Jamie Galloway, P. Eng.
		<b>Title:</b>	Town Engineer
		<b>Phone:</b>	(705) 526-4275 X 2267
<b>Canadian Corporate Head Office Address (Street):</b>		<b>Email:</b>	kgalloway@midland.ca
		<b>Fax:</b>	(705) 526-9971
<b>575 Dominion Avenue</b>		<b>Secondary Contact Name:</b>	Lyell Bergstrom
<b>City: Midland</b>		<b>Title:</b>	Engineering Technician
<b>Postal Code: L4R-1R2</b>		<b>Phone:</b>	(705) 526-4275 X 2220
<b>GST/HST #: 108128182 RT</b>		<b>Email:</b>	lbergstrom@midland.ca
		<b>Fax:</b>	(705) 526-9971

**FACILITY INFORMATION**

<b>Sector:</b>		<b>NAICS Number (six digits):</b>	221320
<b>Facility Name:</b>	Waste Water Treatment Centre	<b>Facility Description:</b>	Bay St. WWTC is a municipal wastewater treatment plant in Midland, ON, owned and operated by the Corporation of the Town of Midland.
<b>Facility Address:</b>			
<b>Street:</b>	200 Bay St.		
<b>City:</b>	Midland		
<b>Postal Code:</b>	L4R 1J5		

**DETAILED ENGINEERING STUDY CONSULTANT'S INFORMATION**

<b>Company Name:</b>	R.H. Shergold & Associates		
<b>Authorized Contact Name:</b>	Jennifer Shergold	<b>Secondary Contact Name:</b>	Sandy Bartscher
<b>Phone:</b>	519.292.1407	<b>Phone:</b>	519.241.3151 ext 209
<b>Fax:</b>	866.773.0076	<b>Fax:</b>	866.773.0076
<b>Email:</b>	jennifer.shergold@rmsgants.com	<b>Email:</b>	sandy.bartscher@rmsgants.com



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**SUMMARY DESCRIPTION OF THE CONSULTANT'S SCOPE OF WORK**

Please include a *brief* description of the scope of work to be performed in the study:  
 Our focus will be on the viability of installing a Combined Heat and Power (CHP) or Cogen plant to simultaneously meet the electrical and heating requirements of the facility. The DES will consist of: System Energy Use Measurement; System Energy Use Analysis; Detailed Financial Analysis; and a Complete Savings Map.

**PROPOSED DETAILED ENGINEERING STUDY REQUEST**

Estimated Detailed Engineering Study cost:	48008		
Proposed Study start date:	01-May-15	Proposed Study completion date:	11-Jul-15
Is there a completed Preliminary Engineering Study?	<input type="checkbox"/>	Yes, with funding from LDC	
	<input checked="" type="checkbox"/>	Yes, without funding from LDC	
	<input type="checkbox"/>	No	

**List of Systems for study funding: (Attach and submit additional pages if necessary)**

System #	Description of each System to be studied	Hours of Operation of the System [hours/year]	Annual Consumption of the System [MWh/year]	Estimated Annual Electricity Savings Potential [MWh/year]	Estimated Electricity Bill Savings (BS) [\$ /year]	Estimated Other Benefits (OB) [\$ /year]	Estimated Project Benefits (BS+OB) [\$ /year]	Estimated Eligible Costs [\$ /year]	Proposed Study Costs [\$ /year]
1	Total Facility Co Gen Potential	8760	1028	1,025	\$143,500		\$143,500	\$331,350	\$48,008
2									
3									
4									
<b>TOTAL</b>			1028	1025	\$143,500		\$143,500	\$331,350	\$48,008

Assumed Electricity Rate (\$/MWh): 140

**THIRD PARTY CONTRIBUTIONS**

Have you applied, or will you be applying for any other third party funding for the Project referred to in this application?	<input type="checkbox"/>	Yes
	<input checked="" type="checkbox"/>	No
Have you received any third party contributions or commitments for contributions? (Including contributions in kind)	<input type="checkbox"/>	Yes
	<input checked="" type="checkbox"/>	No
Amount of third party contributions or commitments:	Source of third party contributions or commitments:	



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**SUPPORTING INFORMATION**

Please indicate below the list of attached supporting documents:

1	Detailed Engineering Study Town of Midland WWTC Scope of Work
2	S_1673_PES_Midland_WWTC_Cogen_Costing_Analysis
3	
4	
5	

**APPLICANT'S DECLARATION**

I, the undersigned, declare that the information in this application is accurate and complete in all material respects.

Authorized Signature:	Title:
	Director of Corporate Services/Clerk
Name: Andrea D. Fay	Date: May 1, 2015
I have the authority to bind the corporation	
Mailing Address (Street):	Phone: (705) 526-4275 X 2209
575 Dominion Avenue	
City: Midland	Fax: (705) 526-9971
Postal Code: L4R-1R2	Email: afay@midland.ca

Note: If this application is accepted, Applicants must enter into a Detailed Engineering Study Funding Contract in order to receive study funding.

To submit this application, please deliver an electronic and a signed pdf version to your LDC or LDC Key Account Manager.

**Release and Waiver and Consent**

FOR VALUABLE CONSIDERATION, the receipt and sufficiency of which are hereby acknowledged, the undersigned hereby, for itself and its successors and assigns:

- releases and forever discharges each of Midland Power ("LDC"), the Ontario Power Authority ("OPA") and their respective representatives, affiliates, third party service providers and agents (collectively, the "Program Operators") and all of the respective past, present and future officers, directors, employees, owners, shareholders, agents, successors and assigns of the Program Operators (collectively, the "Representatives") (the Program Operators and the Representatives hereinafter collectively referred to as "Releasees") from any and all actions, causes of action, suits, complaints, disputes, debts, liabilities, obligations, damages, legal fees, costs, disbursements, expenses, claims and demands of every nature or kind whatsoever and howsoever arising, at law or in equity, or under any statute, including without limitation, claims for property damage, business interruption and personal injury of the undersigned's employees, officers, directors or licensees, which it can, will or may have by reason of any matter, cause or thing arising as a result of, in relation to or in connection with the attendance on one or more occasions by one or more of the employees, officers, directors, representatives, third party service providers or agents of any or all of the Program Operators (collectively, "Persons") at any and all facilities owned or occupied by the undersigned in connection with, arising out of or relating to the initiatives designed by the OPA for electricity conservation and demand management and directed at one of the commercial and institutional, industrial, low-income or residential electricity consumer groups (collectively referred to as the "CDM Program"), other than in the case of the gross negligence or willful misconduct of such Persons during such attendances;
- agrees that the undersigned will not make any claim or take any proceedings against any other person or entity with respect to any matter released and discharged in Section 1 above which may result in any claim arising against any of the Releasees for contribution or indemnity or other relief;
- without limiting the foregoing, the undersigned acknowledges, agrees and consents that by submitting an application ("Application") to participate in a CDM Program or any initiative thereof, whether or not its Application is ultimately accepted:
  - it hereby consents to the collection, use, disclosure and other handling of any information it provides to the Program Operators, including all reports, data, personal information, records showing historical energy use and consumption, and other information of the undersigned or its subcontractors or representatives (collectively, the "Applicant Information") by the Program Operators for purposes relating to the operation, administration or assessment of the CDM Program, any initiative thereof or the Application, and in connection with any reporting activities relating to the CDM Program, which shall include, without limitation: (i) sharing of Applicant Information among the Program Operators; (ii) use by the Program Operators of the Applicant Information provided by the Participant to process any of the undersigned's Applications and to conduct, analyze and report on the results of surveys and modify the CDM Program based on such surveys; and (iii) disclosure to the Ontario Energy Board, the Independent Electricity System Operator, the Ontario Ministry of Energy or the Ontario Environmental Commissioner or their respective successors;





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- (b) it hereby consents to the disclosure by the OPA to the LDC of information regarding the Participant's past participation in other OPA funded conservation and demand management programs for the purpose of processing the Participant's Application; and
- (c) this Release and Waiver and Consent and all Applicant Information, in the possession or control of the LDC and/or the OPA are subject to applicable laws that include the access provisions of the Municipal Freedom of Information and Protection of Privacy Act (Ontario) ("MFIPPA") or the Freedom of Information and Protection of Privacy Act (Ontario) ("FIPPA"), as the case may be, and that as a result, third parties may obtain access to the Applicant Information;
- 4. the foregoing Release and Waiver and Consent will continue in full force and effect for the benefit of the Releasees and will apply to each Application submitted by the undersigned to the LDC and to the extent of any conflict between this Release and Waiver and Consent and the terms of any agreement or other document entered into by the undersigned and one or more of the Program Operators pursuant to or in connection with the CDM Program or any part thereof, or any initiative under any CDM Program, the terms of this Release and Waiver and Consent will prevail; and
- 5. this Release and Waiver and Consent will be governed by and construed in accordance with the laws of the Province of Ontario and the federal laws of Canada applicable therein.