

Request for Decision

Sudbury and District Energy Corporation (SDEC) Agreement

Presented To:	Finance and Administration Committee
Presented:	Tuesday, Oct 22, 2019
Report Date	Wednesday, Oct 09, 2019
Type:	Referred & Deferred Matters

Resolution

THAT the City of Greater Sudbury directs staff to enter into a sole source agreement with the Sudbury and District Energy Corporation (SDEC), as they are the only company that has the infrastructure in place to meet the requirements of the City, for the provision of heating and cooling at Tom Davies Square and to negotiate rates for a period of 20 years, as outlined in the report entitled "Sudbury and District Energy Corporation (SDEC) Agreement", from the General Manager of Corporate Services, presented at the Finance and Administration Committee meeting on October 22, 2019.

Relationship to the Strategic Plan / Health Impact Assessment

This report refers to the provision of heating and cooling to Tom Davies Square and the replacement of aging infrastructure.

Report Summary

An agreement was negotiated in 1999 between the former City of Sudbury and the Sudbury District Energy Corp (SDE) to supply heating to Tom Davies Square (TDS) and heating and cooling to the Sudbury Community Arena. The 20 year contract expires in November 2019.

An analysis of options (renegotiating an agreement with SDE or investing in capital infrastructure to self-generate heating and cooling) was completed by staff. At the Finance and Administration Committee meeting of August 13, 2019, in an original reported, entitled "SDEC Agreement" it was recommended that the City of Greater Sudbury renegotiate the agreement with SDE.

A decision was deferred by the Finance and Administration Committee on August 13, 2019, pending responses to several questions. This report provides responses to those questions.

Signed By

Report Prepared By

Rob Blackwell
Corporate Project Management
Coordinator
Digitally Signed Oct 9, 19

Financial Implications

Liisa Lenz
Coordinator of Budgets
Digitally Signed Oct 9, 19

Recommended by the Department

Kevin Fowke
General Manager of Corporate
Services
Digitally Signed Oct 9, 19

Recommended by the C.A.O.

Ed Archer
Chief Administrative Officer
Digitally Signed Oct 9, 19

Financial Implications

Should the City proceed to enter into the agreement recommended in this report, the 2020 operating budget will need to be increased approximately \$137,000 to reflect the capital portion of the agreement in regards to cooling. This operating expense will negate the requirement for approximately \$2 million in capital funding as the City will no longer need to replace the current chillers that are at the end of their useful lives.

Background

An agreement was negotiated in 1999 between the former City of Sudbury and the Sudbury District Energy Corp (SDE) to supply heating to Tom Davies Square (TDS) and heating and cooling to the Sudbury Community Arena. The 20-year contract expires in November 2019. SDE has committed to an extension to January 1, 2020.

At the August 13th, 2019 Finance and Administration Committee Meeting a report entitled “SDEC Agreement” was tabled. That report recommended another 20-year agreement with recently negotiated rates that resulted in net savings of \$660K for heating and cooling Tom Davis Square taking into account comparable rates to self-generate heating and cooling and required capital expenditure to upgrade and maintain boilers and chillers at TDS.

The Committee had several questions that required further analysis. A decision on the agreement was deferred.

This report provides clarification and some further analysis in response to the questions and issues raised at the August 13th meeting.

Link to original report:

<http://agendasonline.greatersudbury.ca/index.cfm?pg=feed&action=file&agenda=report&itemid=5&id=1370>

Questions/Issues:

- Implications for a 10-year contract with an option to extend for 10 years
- Implications for costs if we include 199 Larch St and “the Junction” in the future
- Implications if self-generating option is discounted @ 2.6% instead of 3.23%
- Can we purchase SDEC if we are going to be the primary user in Sudbury would it make sense to buy it and run it as a profit centre?

Analysis

Implications of a 10 years agreement with an option to renew

A comparison of the annual costs for heating and cooling for SDE provided energy for a 20-year contract compared to a 10-year contract suggests that the shorter term contract would result in an increased total cost (for heating and cooling) of approximately \$76,200 per year.

The present value comparison for a 10-year agreement with a 10-year renewable option (to provide a 20-year comparison), suggests that the SDEC option would be approximately \$860K more expensive than the self-generating option. There is inherent risk in this option as the present value calculation does not consider changes that could impact the contract for the “optioned” period (years 11 – 20), the rates for these years could potentially be higher than the rates that the City has been able to negotiate.

Implications for costs if we include 199 Larch St and “the Junction” in the future

Discussions have been occurring with SDE regarding the existing cooling function at 199 Larch St, and they have expressed interest in connecting the building to the district loop as there may be mutual benefits in fully utilizing the capacity of the energy systems in that facility.

In addition to the potential for an agreement for 199 Larch St. and the existing cooling function, there may also be potential for additional capital cost avoidance in supplementing or replacing the heating system that will require future replacement/repairs. It is anticipated that the heating system for 199 Larch St. will be near the end of its life cycle in approximately 10 years. Adding this facility to the district loop for heating could potentially be considered at that time.

High level cost estimates could be provided for future developments (i.e “The Junction”) based on known factors (square footage). SDE staff have advised that any cost estimates for heating/cooling for future facilities would be based on individual buildings and needs.

Regarding potential for including the “Place des Arts” development in the district energy program, it is reported that the design for that project had been completed with a self-generating design.

Implications of lower interest rates if we debt finance for capital upgrade to self-generate

Lower interest rates, for the corporation, would reflect a lower “discount” rate for a capital project (since we would not likely “borrow” funds to complete the capital work). There would be an annual difference of \$7,797 if the capital investment is discounted at 2.6% over a 20-year period, instead of 3.23% with a self-generating heating/cooling option.

Can we purchase SDEC?

The short answer is “yes”. In the right circumstance, and for the right consideration, Toromont Power Systems has responded that they would consider a sale. They would also consider a sale with a contract to operate/maintain. Toromont has provided examples of other Municipalities where they have either sold the direct energy operation to a municipality or sold and were retained to operate the facility. Toromont’s Greater Sudbury operations also encompasses an emergency generation system and heating and cooling generation plant at Health Sciences North. The representatives could not provide an order of magnitude regarding a potential price tag for a purchase, as this would require significant analysis on their end as well.

If City Council wished to pursue this option, an in-depth, detailed analysis of the business model and financial implications would be required.

Background

An agreement was negotiated in 1999 between the former City of Sudbury and the Sudbury District Energy Corp (SDE) to supply heating to Tom Davies Square (TDS) and heating and cooling to the Sudbury Community Arena. The 20-year contract expires in November 2019.

As part of the overall district energy concept, significant infrastructure was created to support the transportation of energy (hot water, steam, chilled water) to various buildings in the downtown core. These buildings' heating and cooling energy requirements are supplied by a centralized heating and cooling plant. The Energy Service is delivered in the form of hot and chilled water from centralized facilities. The buildings use hot and chilled water to provide for their space heating, domestic hot water, and cooling requirements. Figure 1 illustrates the buildings in the downtown core currently serviced by SDE.

The City of Greater Sudbury (CGS) currently uses SDE for heating 200 Brady and cooling and heating the Sudbury Community Arena. The original contract for services for TDS and the Sudbury Community Arena provided for a "fixed capacity charge" to assist the service provider in funding capital costs for the infrastructure, and incremental "energy costs" that were calculated based on actual energy consumption.

In addition to the SDE contract expiring, the chillers currently being utilized to provide cooling for TDS are reaching end of useful life and would require significant capital investment to replace. Since the original agreement with SDE. Not renewing the SDE contract would also result in CGS having to further invest in a solution to heat TDS and find a solution to heat and cool the Sudbury Community Arena.

Options and Financial Information

A recent cost/benefit analysis, based on historical costs for heating and cooling, anticipated capital costs to self-generate and estimates from SDE, have been completed to compile options to ensure that CGS has a cost-effective means of heating and cooling the affected facilities moving forward. Additionally, SDE has committed to ensuring that cost of heating and cooling utilizing their system will not exceed the costs that could be anticipated if CGS chose to self-generate heating and cooling.

Considerations for the financial impact of any decision taken regarding the heating and cooling of TDS include several factors. As SDE infrastructure is currently in place for heating and any additional capital costs for cooling would be borne by SDE (and recovered as a "fixed capacity charge"), there is no immediate impact to current or future capital budgets for CGS.

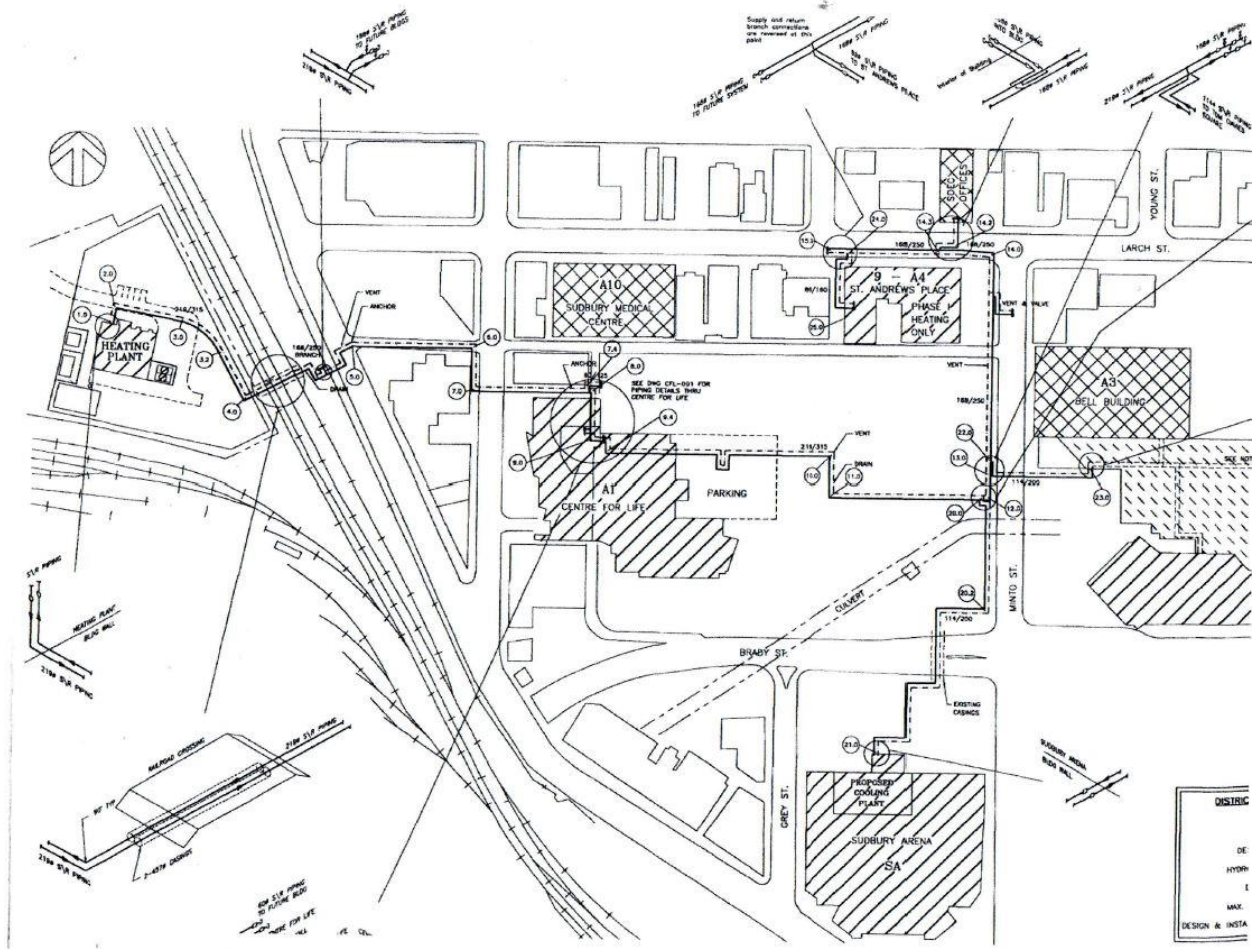


Figure 1: SDE Map – Downtown

A solution that includes self-generating heating and cooling for TDS would require significant capital investment as the current infrastructure does not exist to adequately provide the necessary level of service. Estimates for the initial capital investment for heating are approximately \$977,400. Capital investment for a self-generated cooling solution is estimated to be approximately \$2M. These estimates are for TDS but do not address the requirements of the Sudbury Community Arena, which currently relies on SDE for heating and cooling.

As referenced in Table 1, when comparing the cost of providing heating and cooling using SDE or self-generating heating and cooling, the overall costs are relatively equal on an annual basis, but when a longer term calculation is applied using present value over a 20 year term, there is a significant advantage in maintaining the relationship with SDE. As per "Note 2" in the table below, this longer-term calculation includes the requirement to make approximately \$3M in capital expenditures in 2020.

Table 1: Annual Costs

	SDEC	Self-Generated	Variance
Heating			
Operating	\$125,700	\$125,700	
Capital	\$98,300 ¹	\$67,102 ²	
Sub-Total	\$224,000	\$192,802	\$31,198
Cooling			
Operating	\$61,300	\$61,300	
Capital	\$106,200 ¹	\$137,306 ²	
Sub-Total	\$167,500	\$198,606	(\$31,106)
TOTAL	\$391,500	\$391,408	\$92
<i>Notes:</i>			
¹ Annual Fixed Capacity Charge - operating budget expense			
² Capital annualized @ 3.23% over 20 years			

Table 2: Present Value - 20 yrs

	SDEC	Self-Generated	Variance
Heating	\$3,781,799	\$3,517,782	\$264,017
Cooling	\$2,831,495	\$3,755,877	(\$924,382)
TOTAL	\$6,613,294	\$7,273,659	(\$660,365)

A net present value calculation is used as a comparison tool to show the impact of various options for an investment that has differing costs over a period. In the above example the cost avoidance of not having to do a large capital investment in the cooling system shows that the decision to procure heating and cooling provides a lower cost to the City.

Other Considerations

Capital Costs Avoidance

Many competing priorities for capital funding across the organization and partnering with SDE removes the requirement for further capital funding for heating and cooling at TDS and the Sudbury Arena.

Community Impact

An agreement will see a continuance of the long-standing partnership that benefits not only CGS but neighbouring downtown businesses and institutions.

Green Initiatives

An agreement would result in reduced carbon dioxide emissions, resulting in a reduced carbon footprint (reduction of approximately 73 tons of carbon dioxide emissions).

Economic Drivers

There is potential for CGS to advocate for SDE as a creative incentive for downtown businesses and initiatives, to include district energy as a source of heating and cooling for new development or replacement of heating and cooling systems for existing businesses.

Conclusion

The CGS renegotiate the sole source agreement with SDE, including a rate structure, for a period of 20 years. SDE has committed to ensuring that costs for a new contract will not exceed costs anticipated if self-generating heating/cooling. This option avoids the risk of a major capital project that would require the procurement, installation and ongoing maintenance of self-generating. It also ensures that the Sudbury Community Arena has a consistent source of heating and cooling and with the continued presence of SDE in the downtown core, other buildings currently being serviced, and future development can access the service.