

DATE: June 12, 2012

TO: Board of Trustees

FROM: Edgar Schmidt, Superintendent of Schools

SUBJECT: Energy Service Company (ESCO) Bylaw

ORIGINATOR: Brian Smith, Executive Director Finance & Infrastructure

RESOURCE STAFF: Cheryl Hagen, Angela Komick, Coreen Moccia, John Nicoll, Larry Schwenneker, David Supruniuk

REFERENCE: School Act
School Act-Capital Borrowing Regulation
Conference Report-January 10, 2012

ISSUE

To initiate an energy retrofitting program in selected schools and district buildings financed by way of the issuance of debentures through a debenture bylaw. The debenture cost will be financed by reduction in energy costs, guaranteed by the energy performance contractor, Ameresco Canada.

RECOMMENDATION

- 1) **That subject to the Board of Trustees approval of the following debenture borrowing bylaw; BE IT RESOLVED - THAT the Board of Trustees approve entering into an Energy Services Agreement with Ameresco Canada.**
- 2) **That by-law No 2011-12-1 be introduced (Attachment I).**
- 3) **That by-law No 2011-12-1 be read for the first time.**
- 4) **That by-law No 2011-12-1 be read for the second time.**
- 5) **That, in accordance with the authority of Section 69 of the School Act, by-law No 2011-12-1 be read for the third time.**
- 6) **By-law No 2011-12-1, having been read three times, be passed.**

BACKGROUND

Energy services companies have been active in the industry for some time and Energy Performance Contracts have been used by provincial governments, school boards and municipalities to fund urgently required infrastructure energy retrofits, especially when capital funding has been in short supply.

A Request for Proposal (RFP) was issued for an Energy Performance Contract (EPC). The RFP closed on September 7, 2011. Three proposals were received from the following firms: Ameresco Canada, Johnson Controls and Honeywell. Ameresco Canada provided the best proposal based on lowest fees, highest qualifications, and best plan and strategy.

RELATED FACTS

The Feasibility Study Report (Attachment II) shows a contract value with Ameresco Canada of \$15,000,000. This expenditure will yield annual savings of \$854,669 based on a simple payback of 17.6 years which in turn will be used to finance debenture borrowing payments.

Energy Performance Contract means an agreement between Ameresco and Edmonton Public Schools. Ameresco provides a comprehensive turn-key service for energy efficient retrofits of buildings including detailed feasibility study, design, project management, construction, monitoring and verification of savings, building occupant training, maintenance and custodial training. Total project costs, including financing, are paid from cost savings.

Schools and buildings chosen for this project were based on an energy savings potential (Attachment III).

The utility savings represent a 20% reduction in electricity consumption and a 18% reduction in gas consumption. The project will also result in a reduction in greenhouse emissions of approximately 5,618 tonnes CO₂, which is a 19% reduction of the current emissions and is equivalent to permanently removing approximately 1,080 cars from the roads.

OPTIONS

If the district does not proceed with an Energy Performance Contract at this time, the District will continue to face increased utility costs and consumption due to school infrastructure not being retrofitted or replaced with energy efficient equipment and systems.

Existing infrastructure is inefficient and is obsolete.

CONSIDERATIONS & ANALYSIS

Financial Summary:

• Total Contract Value	\$15,000,000
• Total Annual Savings	\$854,669
• Simple Payback	17.6 years
• Debenture Borrowing Required	\$15,000,000
• Financing Interest Rate (assumed)	3.1%
• Annual Inflation Rate (assumed)	2.25%

NEXT STEPS

Upon the approval of the Board of Trustees for this project, a contract will be signed with the Energy Service Company, Ameresco Canada. The project will move forward subject to adoption of the debenture borrowing bylaw by the Board of Trustees and the subsequent approval of the Minister of Education.

The following steps and timelines are applicable to this project

- May/June 2012-Board Approval of Borrowing Bylaw
- May 2012-Energy Services Agreement with Ameresco to be executed
- June 2012-Public Advertising of Debenture
- July 2012-Ministerial Approval

- August 2012-Request debenture borrowing from Alberta Capital Finance Authority (provided ministerial approval has been received)
- September 15, 2012-Alberta Capital Finance Authority will issue debentures. (provided ministerial approval has been received)
- September/October 2012-Commencement of Project-(provided ministerial approval has been received)
- September 1, 2014-Completion of Project

ATTACHMENTS & APPENDICES

ATTACHMENT I	By-law 2011-12-1
ATTACHMENT II	Executive Summary-Feasibility Study Report
ATTACHMENT III	List of Schools and Buildings for an Energy Performance
APPENDIX I	ACFA Indicative Interest Rates

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BY-LAW NO. 2011-12-1

A BY-LAW RELATING TO THE ISSUE OF DEBENTURES OF THE
EDMONTON SCHOOL DISTRICT NO. 7 OF THE PROVINCE OF ALBERTA

WHEREAS it is deemed expedient by the board of trustees of the Edmonton School District No. 7 of the Province of Alberta, that the sum of \$15,000,000 should be borrowed on the security of the District, by the issue of debentures repayable in consecutive semi-annual installments with interest rate as determined from time to time by the Alberta Capital Finance Authority, for energy retrofits to schools, and district buildings in the City of Edmonton, for energy conservation.

TOTAL ESTIMATED COST OF ENERGY RETROFITS TO SCHOOL AND DISTRICT BUILDINGS FOR
ENERGY CONSERVATION

\$15,000,000

THEREFORE, the Board of Trustees of the said District enacts as follows:

1. That the necessary proceedings be taken under the provisions of the School Act, to obtain authority of the Minister of Education to borrow aforesaid debenture funds or such portion of the said funds as may be required, for the aforesaid purposes.
2. That upon receiving the required written authorization, the Board of Trustees shall issue, on security of the district, debentures in the amount not exceeding the sum of fifteen million dollars (\$15,000,000) repayable in forty (40) consecutive semi-annual installments with interest at the rate as determined from time to time by the Alberta Capital Finance Authority.

READ A FIRST TIME THIS _____ DAY OF _____, A.D. 2012

CHAIRMAN

BOARD SECRETARY-TREASURER

READ A SECOND TIME THIS _____ DAY OF _____, A.D. 2012

CHAIRMAN

BOARD SECRETARY-TREASURER

****READ A THIRD TIME WITH THE UNANIMOUS CONSENT OF ALL MEMBERS PRESENT
AND**

PASSED THIS _____ DAY OF _____, A.D. 2012

CHAIRMAN

BOARD SECRETARY-TREASURER

(**SEE SECTION 69 OF THE SCHOOL ACT)

OR

READ A THIRD TIME THIS _____ DAY OF _____, A.D. 2012

CHAIRMAN

BOARD SECRETARY-TREASURER

1. Executive Summary

Ameresco Canada is pleased to submit this Feasibility Study Report for an Energy Performance Contract project for Edmonton Public Schools (EPS). This Feasibility Study was conducted under a Negotiated Contract issued by EPS following their selection of Ameresco Canada as the successful respondent to Request for Proposal P6298.

This Feasibility Study report includes an analysis of current energy consumption and summarizes the results of the detailed site audits that were conducted at 27 schools and 3 administration buildings. It also defines the scope of work selected by EPS staff from a wide array of potential efficiency and facility renewal measures identified as well as the annual guaranteed savings and project cost for reference in the Energy Services Agreement between the two parties. The project scope includes upgrading lighting to T-8 lamps and electronic ballasts and replacing old boilers with new high efficiency boilers in many schools along with other energy efficiency measures such as scheduling the operation of building mechanical systems to closely match the building occupancy. The scope was arrived at after a number of meetings and consultations with EPS staff including detailed discussions of options.

The \$15,001,822 scope of work selected for these 30 facilities will generate approximately \$854,669 in annual savings at current utility rates. Using appropriate utility price escalations, these savings are sufficient to repay the cost of financing the entire project (including the interest at the current debenture interest rate) within the 20-year maximum term stipulated in the School Act borrowing regulations.

The facility renewal aspects of the project will not only improve the energy efficiency in these 30 facilities and reduce the deferred renewal in them but it will also improve key areas of occupant comfort in the schools that have been shown to increase learning and teacher effectiveness.

The utility savings represent a 20% reduction in electricity consumption and an 18% reduction in gas consumption. The project will also result in a reduction in green house gas emissions of approximately 5,618 Tonnes CO₂ which is a 19% reduction of the current emissions and is equivalent to permanently removing approximately 1,080 cars from the roads.

The tables on the following page show the facilities included in the project and summarize the project cost and savings.

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List of Facilities Included in EPC Project

Facility	Construction date	Facility	Construction date
Belmont ES	1979	Kirkness Elementary	1983
Bennett Centre	1913	L.Y. Cairns HS	1969
Centre for Education	1981	Lago Lindo Elementary	1990
Crawford Plains ES	1983	LaPerle Elementary	1983
Delwood Elementary	1966	Lynnwood Elementary	1959
Distribution Centre	1985	M. E. Lazerte HS	1970
Duggan Elementary	1971	Michael A. Kostek ES	1994
Dunluce Elementary	1979	Pollard Meadows ES	1980
Earl Buxton Elementary	1991	Rio Terrace ES	1961
Elmwood EJHS	1960	S. Bruce Smith EJHS	1991
George H. Luck	1993	Sakaw Elementary	1980
Harry Ainlay HS	1966	T.D. Baker JHS	1991
Hillcrest JHS	1962	Velma E. Baker ES	1993
John D. Bracco JHS	1992	W. P. Wagner HS	1968
Kate Chegwin JHS	1992	Youngstown Elementary	1959

EPC Project Cost and Financing

Project Financial Summary	
Total Measures Implementation Cost	\$ 14,619,572
Project Expenses	\$ 382,250
Total Project Cost	\$ 15,001,822
Total Project Cost and Debenture	
Borrowing Amount	\$ 15,001,822
Project Annual Savings	\$ 854,669
Simple Payback	17.6
Financing Interest Rate	3.1%
Annual Utility Cost Inflation Rate	2.25%

4.2 Project Cost Breakdown and Invoicing

The following table summarizes the breakdown of the total project cost into sub-components.

Financial Summary	
External Measures Cost (including mark-up)	\$ 12,191,968
Design & Engineering	\$ 971,042
Project Management	\$ 647,361
Commissioning & O/M Manuals	\$ 53,947
Administration	\$ 53,947
Savings Guarantee Risk Premium	\$ 701,308
Measures Implementation Cost	\$ 14,619,572
Project Expenses	
Feasibility Study	\$ 147,000
Training and Occupant Awareness	\$ 105,000
Contingency for Asbestos testing	\$ 26,250
Project Sub-total	\$ 14,897,822
Monitoring and Verification (2 year)	\$ 104,000
Total Project Cost	\$ 15,001,822

Invoicing for the project will be based on actual labour and material costs incurred plus a 13% mark-up for overhead and profit as per the RFP response. In addition, the fees for Design & Engineering, Project Management, Commissioning & O/M Manuals and Administration will be invoiced based on a percent-complete basis using the total fee amounts noted above. These fees are based on the selected scope of work and the fee percentages included in the RFP response. A risk Premium of 6.5% will be applied to the external measures cost (excluding mark-up) on each invoice.

The total amount invoiced for the selected scope of work cannot exceed the total upset cost limit of \$15,001,822 (excluding GST) including project expenses and Monitoring. Due to the fact that cost estimates have been provided for the purposes of establishing the upset limit prior to completing detailed design, the detailed scope of work may have to be adjusted if it appears that actual costs are going to exceed the original estimates.

List of Schools and Buildings for an Energy Performance Contract
Edmonton Public Schools

#	Building Name	Building or DU #	Address	Age	Area
					m ²
					Sep 11-Aug 12
1	Bennett Centre	699	9703-94 Street	1913	1,050
2	Belmont Elementary	228	3310 - 132 A Avenue	1979	3,520
3	Centre for Education	312	1 Kingsway	1981	16,136
4	Crawford Plains ES	263	4210-139 Street	1983	3,705
5	Delwood Elementary	194	7315 Delwood Road	1966	5,299
6	Distribution Centre	393	18004 - 116 Avenue	1985	7,354
7	Duggan Elementary	218	10616-36A Avenue	1971	3,708
8	Dunluce Elementary	246	11735-162 Avenue NW	1979	4,108
9	Earl Buxton Elementary	277	250 Rhatigan Road East	1991	3,915
10	Elmwood EJHS	204	16325-83 Avenue	1960	5,024
11	George H. Luck	278	300 Bulyea Road	1993	3,105
12	Harry Ainlay HS	59	4350-111 Street	1966	25,272
13	Hillcrest JHS	552	16400 - 80 Avenue	1962	5,612
14	John D. Bracco JHS	573	3150-139 Avenue	1992	5,749
15	Kate Chegwin JHS	574	3119-48 Street	1992	5,765
16	Kirkness Elementary	262	610 Kirkness Road	1983	3,523
17	L.Y. Cairns HS	702	10510-45 Avenue	1969	10,151
18	Lago Lindo Elementary	276	17303-95 Street	1990	3,742
19	LaPerle Elementary	267	18715-97A Avenue	1983	4,005
20	Lynnwood Elementary	208	15451-84 Avenue	1959	3,850
21	M. E. Lazerte HS	63	6804-144 Avenue	1970	24,204
22	Michael A. Kostek ES	281	5303-190 Street	1994	4,106
23	Pollard Meadows ES	258	1715-48 Street	1980	4,084
24	Rio Terrace Elementary	211	7608 - 154 Street	1961	4,642
25	S. Bruce Smith EJHS	571	5545-184 Street	1991	6,146
26	Sakaw Elementary	251	5730-11A Avenue	1980	3,992
27	T.D. Baker JHS	570	1750 Millwoods Road East	1991	6,696
28	Velma E. Baker ES	280	2845-43 A Avenue	1993	3,844
29	W. P. Wagner HS	57	6310 Wagner Road	1968	22,974
30	Youngstown Elementary	213	10330-163 Street	1959	4,691
	Total				209,972

ACFA - Lending Rates**ACFA Indicative Interest Rates**

The following indicative interest rates are set semi-monthly and will be the basis of calculating prepayment penalties when necessary. Borrowing rates are calculated based on current market conditions and represent an estimate of the interest rates ACFA could construct in the financial market. Dates noted with an asterisk (*) are actual rates.

As of	3 Year	5 Year	10 Year	15 Year	20 Year	25 Year	30 Year
15-Apr-12	1.677	1.916%	2.536%	2.938%	3.184%	3.336%	3.415%
01-Apr-12	1.652	1.896%	2.552%	2.958%	3.202%	3.354%	3.433%
*15-Mar-12	n/a	1.813%	2.439%	2.769%	3.064%	3.263%	3.315%
01-Mar-12	1.571%	1.776%	2.403%	2.839%	3.109%	3.277%	3.366%
15-Feb-12	1.503%	1.694%	2.360%	2.800%	3.073%	3.243%	3.331%
01-Feb-12	1.325%	1.527%	2.203%	2.663%	2.947%	3.125%	3.219%
15-Jan-12	1.292%	1.532%	2.232%	2.697%	2.974%	3.148%	3.238%
01-Jan-12	1.330%	1.577%	2.303%	2.755%	3.027%	3.193%	3.280%
*15-Dec-11	1.251%	1.520%	2.306%	2.788%	3.145%	3.250%	3.310%
01-Dec-11	1.382%	1.689%	2.504%	2.980%	3.261%	3.429%	3.506%
15-Nov-11	1.329%	1.608%	2.424%	2.928%	3.214%	3.393%	3.493%
01-Nov-11	1.484%	1.815%	2.668%	3.168%	3.449%	3.610%	3.691%
15-Oct-11	1.466%	1.796%	2.659%	3.162%	3.452%	3.622%	3.708%
01-Oct-11	1.308%	1.623%	2.481%	2.997%	3.296%	3.478%	3.574%
*15-Sep-11	n/a	1.650%	2.485%	3.013%	3.292%	3.411%	3.616%
01-Sep-11	1.524%	1.847%	2.728%	3.233%	3.544%	3.732%	3.828%
15-Aug-11	1.325%	1.627%	2.497%	3.031%	3.358%	3.572%	3.693%
01-Aug-11	1.752%	2.080%	2.894%	3.369%	3.644%	3.816%	3.911%
15-Jul-11	1.824%	2.204%	3.051%	3.525%	3.791%	3.953%	4.040%
01-Jul-11	1.930%	2.324%	3.195%	3.661%	3.922%	4.082%	4.169%
*15-Jun-11	1.875%	2.2545%	3.140%	3.569%	3.904%	4.043%	4.157%
01-Jun-11	1.962%	2.366%	3.214%	3.672%	3.929%	4.081%	4.161%
15-May-11	2.122%	2.531%	3.344%	3.791%	4.046%	4.195%	4.274%
01-May-11	2.143%	2.567%	3.393%	3.857%	4.121%	4.274%	4.350%
15-Apr-11	2.184%	2.636%	3.464%	3.911%	4.163%	4.301%	4.371%