

EDMONTON PUBLIC SCHOOLS

February 23, 2010

TO: Board of Trustees

FROM: E. Schmidt, Superintendent of Schools

SUBJECT: Responses to Board Requests for Information

ORIGINATOR: R. MacNeil, Assistant Superintendent
D.R. Power, Assistant Superintendent - Treasurer

RESOURCE
STAFF: John Nicoll, Eila Steinberg

INFORMATION

CONFERENCE REQUEST #265, JANUARY 5, 2010, RE OVER EXPENDITURE OF PLANT OPERATIONS AND MAINTENANCE (PO&M) LAST YEAR – PROVIDE INFORMATION ON ENERGY CONSERVATION MEASURES THAT ARE AND COULD BE IMPLEMENTED.

Over Expenditure Information

Alberta Education requires certain information to be provided to them and in the format that they require. Schedule A (Appendix I) was provided to Alberta Education showing the information in the format established by them.

The excess expenditure over revenue is \$24.3 million in relation to operations and maintenance of schools. However approximately \$4.9 million of amortization of investment in unsupported capital assets is not reflected in the schedule as revenue. Your administration believes that this amount should be reflected on the schedule. Alberta Education's format in the Schedule A does not allow for this amount to be recorded. If the amount was recorded, the shortfall would be \$19.4 million.

The District is allowed to allocate four per cent of our revenue to be used for Board and System Administration. Since all the funds of \$29.5 million were not needed for this expenditure, the excess funds of \$10.6 million were utilized to partially fund the PO & M shortfall of \$19.4 million. The remainder of \$8.8 million was utilized from instructional grants.

Energy Conservation Information

The District has undertaken numerous energy conservation measures in the past. Current and future energy conservation initiatives can be classified as being either technical or behavioural. In recent years the focus has shifted to more behavioural actions to achieve greater energy conservation.

There are a number of technical energy conservation initiatives that are undertaken in the District: lighting upgrades, boiler replacements, installation of building automation systems (BAS), and heating ventilation or air conditioning (HVAC) motor replacements, to name the most common. All of these initiatives, while conserving energy, have the ultimate goal of ensuring the best in lighting, temperature, and air quality for students and staff. This aligns with current research linking improved student achievement to facility conditions.

Behavioural solutions are an area that the District is targeting for potential savings. Motivation for staff has been focused on the reduction of utility consumption as a means of reducing the carbon dioxide (CO₂) emissions. Negative impact on the environment is more of a concern to students and staff than utility savings. Through these initiatives the goal is for behavioural changes to last a lifetime, benefitting not only the schools, but the greater global community as well.

Currently in the District there are various behavioural energy initiatives underway as well as upcoming planned events to promote energy conservation, including the training of all staff and students.

For more information please refer to the “District Energy Conservation Initiatives” in Appendix II.

BOARD REQUEST #270, JANUARY 26, 2010; PROVIDE INFORMATION ON WHAT OTHER REVENUE STREAMS ARE AVAILABLE TO THE BOARD IN ADDITION TO CURRENT REVENUE STREAMS AND WHAT IS REQUIRED TO PURSUE THESE REVENUE STREAMS. School jurisdictions in Alberta only have the powers and authorities that are provided to them in the *School Act*.

The provincial government established school boards for the purpose of providing programs for the education of our resident students. The province has assumed full responsibility for the funding of school jurisdictions in Alberta. Some decision units in the District have generated revenue by selling their goods and services to other school jurisdictions, and on an occasion the public. The revenue that has been generated by decision units normally is used to offset the expenditures needed to provide the service and goods. Limited opportunities may be available to the District to expand these programs, since we may be perceived as being in competition with the business sector.

The only additional major revenue source available to the District is the Special School Tax Levy.

A Special School Tax Levy allows public and separate school boards to requisition revenues beyond those provided by the government. The *School Act* enables public and separate school boards to pass a resolution to authorize a plebiscite to obtain the approval of the electors. A resolution is passed in the year of a general election for a maximum of three years, ending December 31 of the year of the next general election.

The amount of the levy cannot exceed three per cent of the budget of the District and the funds raised by the levy can only be used for the purpose authorized in the resolution.

The process involves a number of specific steps and timelines (Appendix III). The wording of the plebiscite is available in Appendix IV.

RM:DRP:ja

- APPENDIX I Schedule A – Allocation of Revenues and Expenses to Programs 2008-2009
- APPENDIX II District Energy Conservation Initiatives
- APPENDIX III Important Dates to Remember When Considering a 2010 Special School Tax Levy
- APPENDIX IV Special School Tax Levy Plebiscite Public Notice Form 20A

SCHEDULE A

School Jurisdiction Code: 3020

ALLOCATION OF REVENUES AND EXPENSES TO PROGRAMS - 2008-2009

REVENUES	ECS Instruction	Grades 1-12 Instruction	Operations and Maintenance of Schools & Maintenance Shops	Transportation	Board & System Administration	External Services	TOTAL
(1) Alberta Education	\$41,558,144	\$521,200,167	\$76,297,988	\$20,548,494	\$27,255,420	\$9,350,673	\$696,210,886
(2) Other - Government of Alberta	\$0	\$366,697	\$1,280,148	\$0	\$104,849	\$2,149,682	\$3,901,376
(3) Federal Government and First Nations	\$10,214	\$1,532,317	\$0	\$3,438	\$105,491	\$985,802	\$2,637,262
(4) Other Alberta school authorities	\$0	\$868,618	\$0	\$6,849	\$162,930	\$3,034,830	\$4,073,227
(5) Out of province authorities	\$0	\$0	\$0	\$0	\$0	\$0	\$0
(6) Alberta Municipalities-special tax levies	\$0	\$0	\$0	\$0	\$0	\$0	\$0
(7) Instruction resource fees	\$0	\$3,674,846					\$3,674,846
(8) Transportation fees-ECS				\$0			\$0
(9) Transportation fees-Grades 1-12				\$8,851,081			\$8,851,081
(10) Other sales and services	\$987,804	\$13,461,104	\$0	\$0	\$900,901	\$7,172,692	\$22,522,501
(11) Investment income	\$0	\$3,608,364	\$0	\$0	\$150,349	\$0	\$3,758,713
(12) Gifts and donations	\$0	\$7,548,361	\$0	\$0	\$0	\$0	\$7,548,361
(13) Rental of facilities	\$0	\$2,463,157	\$0	\$0	\$145,464	\$1,027,975	\$3,636,596
(14) Net school generated funds	\$0	\$15,096,895	\$0		\$629,036	\$0	\$15,725,931
(15) Gains on disposal of capital assets	\$0	\$0	\$0	\$0	\$0	\$0	\$0
(16) Amortization of capital allocations	\$0	\$0	\$8,468,482	\$0		\$0	\$8,468,482
(17) Other revenue	\$0	\$0	\$0	\$0		\$0	\$0
(18) TOTAL REVENUES	\$42,556,162	\$569,820,526	\$86,046,618	\$29,409,862	\$29,454,440	\$23,721,654	\$781,009,262
EXPENSES							
(19) Certificated salaries	\$7,472,345	\$354,926,114			\$2,421,778	\$10,154,892	\$374,975,129
(20) Certificated benefits	\$711,611	\$41,777,532			\$254,919	\$1,302,498	\$44,046,560
(21) Non-certificated salaries and wages	\$15,474,008	\$79,695,877	\$45,601,589	\$749,842	\$9,182,904	\$6,777,346	\$157,481,566
(22) Non-certificated benefits	\$3,548,490	\$17,251,728	\$9,235,497	\$158,685	\$1,906,163	\$1,180,109	\$33,280,672
(23) SUB - TOTAL	\$27,206,454	\$493,651,251	\$54,837,086	\$908,527	\$13,765,764	\$19,414,845	\$609,783,927
(24) Services, contracts and supplies	\$2,500,129	\$41,331,425	\$41,392,599	\$28,388,512	\$4,860,237	\$4,306,809	\$122,779,711
(25) Net school generated funds	\$0	\$15,725,931					\$15,725,931
(26) Amortization of capital assets	\$382,331	\$9,358,266	\$13,151,552	\$10,009	\$215,918	\$0	\$23,118,076
(27) Interest and charges	\$0	\$589,812	\$976,171	\$6,913	\$49,158	\$0	\$1,622,054
(28) Losses on disposal of capital assets	\$0	\$0	\$12,382	\$0	\$0	\$0	\$12,382
(29) Other expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0
(30) TOTAL EXPENSES	\$30,088,914	\$560,656,685	\$110,369,790	\$29,313,961	\$18,891,077	\$23,721,654	\$773,042,081
(31) OVER EXPENSES BEFORE EXTRAORDINARY ITEM	\$12,467,248	\$9,163,841	(\$24,323,172)	\$95,901	\$10,563,363	\$0	\$7,967,181

District Energy Conservation Initiatives

Background

District energy conservation measures can be broken into two categories – technical and behavioural. Technical measures refer to changes in technology, such as a boiler replacement or lighting upgrades. Behavioural energy conservation comes from those changes we make in our practices, such as turning off the lights when leaving a room, or reducing the heat setting of a classroom.

Current Energy Conservation Initiatives

There are a number of technical energy conservation initiatives that are undertaken in the District: lighting upgrades, boiler replacements, installation of building automation systems (BAS), and heating ventilation or air conditioning (HVAC) motor replacements, to name the most common. All of these initiatives, while conserving energy, have the ultimate goal of ensuring the best in lighting, temperature, and air quality for students and staff. This aligns with current research linking improved student achievement to facility conditions.

In the 2009 calendar year, 18 schools had their lighting upgraded to more efficient fluorescent lighting systems (see Attachment I for details). The resulting reduction in power consumption is projected to be approximately 722,000 kWh, or as much as a 15 per cent reduction at each school. This represents a potential savings of 687 metric tonnes of carbon dioxide emissions and \$75,000 per year. In the 2009-2010 school year an additional group of schools are being targeted for lighting upgrades.

Boiler replacements continue to provide energy savings. Most older boilers operate at 50 – 60 per cent efficiency. Current replacements operate in the 80 – 90 per cent efficiency range resulting in a 25 per cent or higher gain almost immediately (see Attachment I for example). These replacements are done through Infrastructure, Maintenance & Renewal (IMR) funds, or building modernization projects when approved.

Other energy savings have been achieved through mechanical systems and the replacement of heating, ventilation and air conditioning motors with more efficient ones. Hot water heating systems have also been right-sized in recent years to ensure efficiency. A recent advance has been the piloting of solar hot water heating panels to offset water heating costs.

Building automation systems use computerized controls to program heating, cooling, lighting and ventilation systems to ensure building settings are guided by American Society of Heating Refrigerating and Air Conditioning Engineers (ASHRAE) standards for temperature and air quality for students and staff. The BAS allows for a building's temperature to be raised and lowered in a consistent and efficient manner. Air quality, as well as temperature can be monitored and controlled automatically to add convenience and reduce operator demands. These controls also allow for maintenance staff to monitor the building's system by remote to ensure safe and efficient operation.

Behavioural solutions are an area that the District is targeting for potential savings. Motivation for staff has been focused on the reduction of utility consumption as a means of reducing the carbon dioxide (CO₂) emissions. Negative impact on the environment is more of a concern to students and staff than utility savings. Through these initiatives the goal is for

behavioural changes to last a lifetime, benefitting not only the schools, but the greater global community as well.

Currently in the District there are various behavioural energy initiatives underway and planned. From the training of custodians, to the education of principals, teachers, support staff, and students, there are many activities and events that promote energy conservation.

School custodians are trained to set and monitor building temperatures at district standardized temperatures (see Attachment I for details). There are “occupied” and “unoccupied” settings that are within the ASHRAE standard 55 -2004 guidelines. The reduction of temperatures, whether manual or automatic, ensures energy conservation. Facilities Services staff present to custodial staff at workshops, professional development sessions, and other events when needed.

Energy conservation presentations have been provided to various staff groups around the District including custodians, school staffs, principal support groups, principal leadership groups and, student environmental clubs. Through a review of district and school specific utility consumption, along with the environmental impacts, the need for greater conservation is brought to the forefront of district operations. Potential energy conservation actions to be carried out locally in the schools by the various groups is also presented. The “Classroom Energy Monitor” program is an example of a classroom level program for teaching students the daily routines associated with energy conservation, such as turning lights off and closing curtains/blinds at the end of each day.

In the spring of 2009, in conjunction with the Earth Day “Lights Out” Challenge, the EnviroMatters area of Facilities Services launched its “Save A Little, Save a Watt” sticker campaign. All district sites were sent stickers to be placed on light switch covers. The stickers reminded staff and students to turn off their lights and other electrical devices when leaving an area. Greater awareness of the environmental savings were provided when district schools were asked to turn off their lights for one hour or more on Earth Day and then the reductions were calculated and posted on-line.

On January 29th, 2010 the first “Student Environmental Symposium” was held at the Centre for Education. This event targeted junior and senior high students who wanted to learn more about environmental and energy conservation activities in their schools.

Other Conservation Initiatives

There are additional energy conservation activities occurring in the District aside from behavioural and technical changes. Purchase of energy efficient appliances, efficient computers, efficient school design, use of an energy service company and networking with other organizations are all part of the energy conservation platform.

The Purchasing Department is promoting energy efficiency through the purchase of Energy Star appliances and energy saving equipment such as photocopiers and printers. Information Technology Services staff are working to standardize computer settings such as monitor sleep modes to ensure energy efficiency of district technology. Facilities Design staff is working to ensure energy efficiency through the design and construction of new buildings, seeking a minimum Canadian Green Building Council (LEED) silver designation.

The District is exploring opportunities to reduce utility costs via retrofitting of building systems and equipment through the energy performance contracting process. This process uses

energy savings and other potential funding sources to finance the cost of the retrofit to a group of selected schools. This special type of building retrofit involves the use of an Energy Service Company (ESCO). These specialized companies can maximize energy savings from buildings and will guarantee the savings in the projects.

Staff of the Facilities Services department is routinely meeting and sharing conservation best practices with other organizations such as the University of Alberta, Council of Educational Facility Planners International, Building Operators & Managers Association, Canadian Green Building Council (LEED), as well as the greater Edmonton area school boards.

2008-2009 Lighting Upgrade Schools

The following 18 schools were selected for lighting upgrades in the 2008-09 budget year:

Aldergrove, Belgravia, Callingwood, Duggan, Edith Rogers, Grace Martin, Kameyosek, Lee Ridge, Lorelei, L.Y. Cairns, McLeod, McNally, Meyonohk, Rideau Park, Rundle, Satoo, Steele Heights, and Sweet Grass.

These schools make up 41,035 of our district's 1,000,000 square meters of floor space. This project was funded through the provincial Infrastructure, Maintenance & Renewal (IMR) fund. The potential yearly utility savings for the 18 schools is approximately 722,000 kWh with a reduction of over 66,000 kilo-grams of carbon dioxide.

Natural Gas Consumption Rates

Our data shows that a boiler replacement and mechanical system upgrades at Grace Martin School in 2008 resulted in a natural gas reduction of over 1500 Giga Joules. This is equivalent to a 44 per cent reduction in comparison of the gas consumption in the years before and after the replacement.

Building Temperature Settings

District buildings are set for two standards, occupied and unoccupied. The comfort setting for occupied classrooms/offices is 21 degrees Celsius. The temperature for the unoccupied spaces is 16 degrees Celsius, unless limitations of the heating system dictate otherwise.

For summertime the occupied settings for spaces with cooling systems is 23 degrees Celsius.

3. IMPORTANT DATES TO REMEMBER WHEN CONSIDERING A 2010 SPECIAL SCHOOL TAX LEVY

**NOTE: CALCULATION OF THE EXACT DATES MUST BE BASED ON WHEN THE
ACTUAL GENERAL ELECTION DATE IS SCHEDULED TO BE HELD.**

Prior to; Monday, May 3, 2010	Review the <i>School Act (SA)</i> , the <i>Special School Tax Levy Plebiscite Regulation (SSTLP Reg.)</i> , the <i>Local Authorities Election Act (LAEA)</i> , and the <i>Municipal Government Act (MGA)</i> .
Prior to; Monday, May 10, 2010	Contact Municipal Affairs to discuss the potential impact of the Special School Tax Levy on the municipality and jurisdiction, and for the municipal contact information.
Monday, May 17, 2010	Coordinate with each affected municipality's returning officer, if plans are to proceed with a question on the ballot.
Sunday, June 20, 2010	Last day to give public notice of the board's intention to meet and consider a resolution to authorize the holding of a plebiscite (Section 190(2) SA).
Thursday, August 19, 2010	Last day to hold a public meeting and pass a resolution to authorize the holding of a plebiscite (Section 190(1) SA).
Sunday, October 17, 2010	Last day to withdraw a plebiscite by resolution, (Section 190(4) SA).
Monday, October 18, 2010	Election Day
Friday, October 22, 2010	Returning officer must post results of plebiscite vote by noon at the office of each local jurisdiction and advise the relevant Minister's Deputy Minister, (Section 96 LAEA).

SPECIAL SCHOOL TAX LEVY PLEBISCITE PUBLIC NOTICE FORM 20A

Form 20A

**SPECIAL SCHOOL TAX LEVY PLEBISCITE
PUBLIC NOTICE**

**School Act, Sections 271 & 276
Special School Tax Levy Plebiscite Regulation, A.R. 94/1998**

ATTENTION: ELECTORS of _____

(Name of District or Division)

No. _____

(Specify a Separate School Jurisdiction)

TAKE NOTICE that: The Board of Trustees of the above District/Division is seeking the approval of electors to levy an additional \$ _____ per year for a period of _____ year/years through a special school tax levy.
(amount) (number)

The funds raised will only be used for:

If this special school tax levy is supported by a majority of electors, it will result in an additional tax of approximately \$ _____ per year for a period of _____ year/years for a property valued at \$100 000 for tax purposes.
(amount) (number)

The Board of Trustees will present the question of a special school tax levy to its electors at the election for school trustees to be held on _____
(date of election)

Secretary-Treasurer/Treasurer Name of School District or Division

Public Notice
271 (1) Subject to this Act, when public notice, other than notice of a public meeting under Section 269, is required to be given under this Act, the notice shall be given
(a) by posting it in 5 or more conspicuous places to which the public has normal and regular access, and
(b) by publishing it, at the same time the notice is posted, in a newspaper circulating within the district or division at least once a week for 2 weeks.
(2) A notice given under this section shall be in a form prescribed by the Minister.