

# **RCCDSB Energy Conservation and Demand Management Plan (Phase II – due July 1, 2014)**

## **Education Sector Background**

### **Funding and Energy Management Planning**

All Boards receive 100% of their funding from the Ministry of Education.

The Ministry announces each Board's funding allocation in March for the next Fiscal Year which runs from September 1<sup>st</sup> to August 31<sup>st</sup>. The Ministry does not provide Boards with multi-year funding allocations.

As a result, while a Board may have a five-year energy management strategy, the Board's ability to implement their strategy is dependent on the funding that they receive in each of the five years covered by their energy management plan.

### **Asset Portfolios and Energy Management Planning**

Energy consumption at a site can be impacted by a number of variables. The following lists provide education sector examples that may impact changes in consumption at a site from one year to the next. These examples will play a significant role in the Board's assessment of energy management priorities.

## **About the Board**

The following statistics apply to the Board's Fiscal Year 2013-14

Total Number of Sites: 24

Total Number of Students:

## **Background**

1. The Board has a qualitative energy conservation goal

Yes (Prose box: Board to insert text)

X No

2. To date the Board's energy management strategy has included the following:

(Prose box: Board to insert text – up to 3 paragraphs)

3. The Board has an energy management position.

In-house

Full time

Part time

- Shared job function
- Contracted third party
- X None

**Energy Consumption Data for the Board**

The values below are “metered” data for the Board.

<b>Utility</b>	<b>Fiscal Year 2011-12 (Baseline)</b>	<b>Fiscal Year 2012-13 (Current)</b>
Total Electricity (kWh)	5,508,845	6,245,324
Total Natural Gas (m3)	637,813	693,241
Total Heating Fuel (Type 1 and 2) (litres - L)	30,408	30,408
Total Heating Fuel (Type 3 and 4) (litres - L)	0	0
Total Propane (litres - L)	0	0
Total Wood (metric tonnes - MT)	0	0
Total District Heat (GJ)	0	0
Total District Cool (GJ)	0	0

The values below are raw data.

	<b>Fiscal Year 2011-12 (Baseline)</b>	<b>Fiscal Year 2012-13 (Current)</b>
Total Energy Consumed (ekWh)	<i>info found in UCD</i>	<i>info found in UCD</i>
Energy Intensity (ekWh/sgft)	17.64	19.61

**Energy Conservation Goal**

The Board has set out the following energy conservation goals for the next five fiscal years

<b>Fiscal Year</b>	<b>2013-14 (ekWh/m2)</b>	<b>2014-15 (ekWh/m2)</b>	<b>2015-16 (ekWh/m2)</b>	<b>2016-17 (ekWh/m2)</b>	<b>2017-18 (ekWh/m2)</b>
<b>Conservation Goal</b>					

\* NOTE TO USERS: these values can be calculated by totalling the values for each fiscal year from the charts entitled “Design, Construction and Retrofit Strategies”, “Operations and Maintenance Strategies” and “Occupant Behaviour Strategies”.

	<b>FY 2013-14 to 2017-18 (ekWh/m2)</b>
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<b>Cumulative Conservation Goal</b>	<i>to be calculated based on values in above chart</i>
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## **Renewable Energy**

For a list of the Board's renewable energy projects, please see Appendix A.

## **Energy Management Strategies**

Energy management strategies fall into three key categories:

1. Design/construction/retrofit
2. Operations and maintenance
3. Occupant Behaviour

### **1. Design/Construction/Retrofit**

#### **Definition**

Design/construction/retrofit encompasses the original and ongoing intent of how a building and its systems are to perform as a whole through the integration of disciplines such as, architecture and engineering.

For the Board's relevant projects over the next five years, please refer to Appendix B.

### **2. Operations and Maintenance**

#### **Definition**

Operations and maintenance includes the strategies the Board uses to ensure that the existing buildings and equipment perform at peak efficiency. For the Board's relevant projects over the next five years, please refer to Appendix C.

### **3. Occupant Behaviour**

#### **Definition**

Strategies that the Board uses to educate occupants, including staff, students and community users, with an emphasis in changing specific behaviours to reduce energy consumption. For the Board's relevant projects over the next five years, please refer to Appendix D.

**Environmental Programs**

1. In 2013-14 schools within the Board that participated in environmental programs.

- EcoSchools  
\_\_\_\_\_ Number of schools that participate
- Earthcare Schools  
\_\_\_\_\_ Number of schools that participate
- Other  
Name of Program: \_\_\_\_\_  
\_\_\_\_\_ Number of schools that participate

**Energy Efficient Incentives**

1. The Board applies to incentive programs to support the implementation of energy efficient projects on a regular basis.

X Yes       No

If yes,

Between Fiscal Year 2009-10 and 2012-13, the Board has received \$\_(board to insert)\_ in incentive funding from various agencies to support the implementation of energy efficient projects.

2. The Board uses the services of the sector’s Incentive Program Advisor.

X Yes       No

**Energy Procurement**

1. The Board participates in a consortia arrangement to purchase electricity.

Yes    X No

If yes,

- CSBSA Electricity Consortia
- Other

Provide Name of Consortia: \_\_\_\_\_

2. The Board participates in a consortia arrangement to purchase natural gas.

Yes      X No

If yes,

- CSBSA Natural Gas Consortia
- Other

Provide Name of Consortia: \_\_\_\_\_

**Demand Management**

1. The Board monitors electrical Demand.

Yes  No

If yes,

- Daily
- Monthly
- Quarterly
- Annually

2. The Board uses the following method to monitor electrical Demand:

- Invoices
- Real-time data
- Online data from the Local Distribution Company (LDC)
- Other

\_\_\_\_\_

3. The Board uses the following methodologies to reduce electrical Demand:

- Equipment scheduling
- Phased/staged use of equipment
- Demand-limit equipment
- Deferred start-up of large equipment (e.g.: chiller start-up in spring)
- Other

\_\_\_\_\_

4. The Local Distribution Companies (LDCs) for the Board explicitly state the Power Factor on each bill.

Yes

The Board monitors Power Factor.

Yes  No

If yes,

- Monthly
- Quarterly
- Annually

No

Some LDCs provide Power Factor, some don't

**Senior Management Approval of this Energy Conservation and Demand Management Plan**

I confirm that (insert Board's name)'s senior management has reviewed and approved this Energy Conservation and Demand Management Plan.

\_\_\_\_\_  
Name  
Job Title

\_\_\_\_\_  
Date