

Draft 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 1st to August 31st. 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.

Facility Variables

- Year of Construction
- Building Area
 - Major additions
 - Sites sold
 - Portables
 - installed
 - removed
- Site Use
 - Elementary school
 - Secondary school
 - Administrative building
 - Maintenance/warehouse facility
- Shared Use Sites (e.g. one building, two boards share common areas and/or partnered with a municipality)
 - Swimming pools
 - Libraries
 - Lighted sports fields
 - Enclosed sports domes
- Equipment/Systems

- Age
- Type of technology
- Lifecycle
- % air conditioned building area

Other Variables

- Programs
 - Day care
 - Before/After School Programs
 - Summer School
 - Community Use
- Occupancy
 - Significant Increase or decrease in number of students
 - New programs being added to a site

About the Board

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

Total Number of Sites: (pre-populated by UCD)

Total Number of Students: (pre-populated by UCD)

Background

1. The Board has a qualitative energy conservation goal

Yes (Prose box: Board to insert text)

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

None

Energy Consumption Data for the Board

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

Utility	Fiscal Year 2012-13 (Baseline)	Fiscal Year 2013-14 (Current)
Total Electricity (kWh)	<i>info found in UCD</i>	<i>info found in UCD</i>
Total Natural Gas (m3)	<i>info found in UCD</i>	<i>info found in UCD</i>
Total Heating Fuel (Type 1 and 2) (litres - L)	<i>Manually entered by Board</i>	<i>Manually entered by Board</i>
Total Heating Fuel (Type 3 and 4) (litres - L)	<i>Manually entered by Board</i>	<i>Manually entered by Board</i>
Total Propane (litres - L)	<i>Manually entered by Board</i>	<i>Manually entered by Board</i>
Total Wood (metric tonnes - MT)	<i>Manually entered by Board</i>	<i>Manually entered by Board</i>
Total District Heat (GJ)	<i>Manually entered by Board</i>	<i>Manually entered by Board</i>
Total District Cool (GJ)	<i>Manually entered by Board</i>	<i>Manually entered by Board</i>

The values below are raw data.

	Fiscal Year 2011-12 (Baseline)	Fiscal Year 2012-13 (Current)
Total Energy Consumed (eKWh)	<i>info found in UCD</i>	<i>info found in UCD</i>
Energy Intensity (eKWh/m2)	<i>info found in UCD</i>	<i>info found in UCD</i>

Energy Conservation Goal

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

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

* 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”.

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

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.

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.

Yes No

Energy Procurement

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

Yes No

If yes,

CSBSA Electricity Consortia

Other

Provide Name of Consortia: _____

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

Yes 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

Date

Job Title