

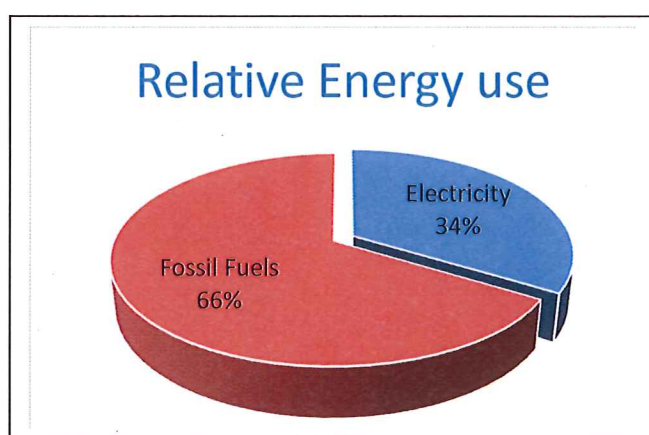
# ***Board of Education of School District No. 27 (Cariboo-Chilcotin)***

## ***2014 Carbon Neutral Action Report***

### ***Executive Summary***

The Board of Education of School District No. 27 continued to take positive action toward our goals of reducing greenhouse gas during the 2014 calendar year and beyond. Projects are based around system upgrades, behavioral change through collaboration between facility personal, teachers, and students and creating a future project pipeline ensuring that improvements are under constant development.

### ***2014 Greenhouse Gas Emissions***



At the close of 2014 considerable time was spent quantifying our annual energy use to begin our energy and emissions reduction plans. During the 2014 year our School District produced 4,122 tonnes of CO<sub>2</sub>e. Since the initial release of the Greenhouse Gas Targets Act in 2008, our District has monitored and aggressively attempted to reduce our overall Carbon production.

### ***Offsets Applied to become Carbon Neutral in 2014***

As required by section 7 of the Carbon Neutral Government Regulation, we have purchased 2,903 tonnes of CO<sub>2</sub>e equivalent offsets from the Pacific Carbon Trust. Included in this total is 2900 tonnes for 2014 and 3 tonnes for prior year adjustments. This purchase fulfils our commitment to be Carbon Neutral during the 2014 year, and compliant with the Greenhouse Gas Targets Act.

As required by section 5 of the Carbon Neutral Government Regulation, 1,222 tonnes of CO<sub>2</sub>e emissions resulting from the operation of school buses were reported as part of our greenhouse gas emissions profile in 2014. However, they were not offset as they are out- of-scope under section 4(2) (c) of the Carbon Neutral Government Regulation.

### ***Emissions Reduction Activities***

School District No. 27 continues to partnered with Rede Energy Solutions in order to work towards a detailed district-wide energy management initiative including continuous involvement and monitoring of projects and planning. Rede's continued and constant involvement surpasses the gains from a standard energy management involvement by providing a coherent overview of all levels of energy management and facilitating inter-tiered collaboration throughout the school district.



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## ***Reducing Greenhouse Gas Emissions Projects of 2014***

**System upgrades** primarily focussing on major lighting upgrades at Columneetza Senior Secondary, 108 Mile Elementary, Cataline Elementary, Anahim Lake, and Peter Skeene Ogden. Savings attribute 13 tonnes CO<sub>2</sub>e.

**A Continuous Optimization Project report** was completed at Peter Skeene Ogden Secondary. The implementation of proposed projects will result in an annual CO<sub>2</sub>e reduction of 221 tonnes and 80% of projects have been executed at the time of this report.

**A detailed Strategic Energy Management Plan (SEMP)** has been created in order to outline future energy conservation projects. Current and imminent projects of 2014 completed energy study sites result in a CO<sub>2</sub>e reduction of 168 tonnes. Implementation of projects is underway and led by Rede Energy Solutions.

Concurrent investigations are underway in identifying the sites to be included in further audits to be completed in 2015. These identified projects form the baseline of energy reduction projects.



**Plug Load** control strategies have been implemented through the district wide “Refrigeration Elimination” program. These controls, while having a large impact on electricity savings but not necessarily on a carbon reduction, contribute to an overall energy conservation awareness by the visibility of the program.

**Future Carbon reduction projects** include complete mechanical upgrades at facilities, such as Cataline elementary, where older units are targeted due to passed “end of life” equipment. Solar domestic hot water system implementations are also in planning at sites such as Peter Skene Ogden Secondary after a previous success of a similar system at Mile 108 elementary.

### ***Energy Optimization***

In order to ensure that energy consumed in our schools is not wasted but also to account for the need to expend energy to create the right learning environments we have created a team of energy managers know as the “Quantum Team”. The team, comprised of internal staff from across the district and external experts, maintains an overview of the energy consumption in our buildings and reviews opportunities to reduce waste. Meeting monthly it constantly updates a prioritized list of current and future projects that will gradually reduce our energy consumption without adversely impacting the learning and working environments. Through the Quantum team we are able to rapidly adopt new or developing technologies as the business cases for each become viable. The Quantum Team also understands that a core part of its role to bring this real-world, economic and environmental project management into the classroom. Working with teachers and students in the coming years, the team will provide content and support for teachers who can build the work to reduce wasted energy into existing curricula in ways that resonate with the students.

Social responsibility and experiential learning is a large part of the educational system today. School District No. 27 believes that we all have a global social responsibility to share with the Government of British Columbia to limit carbon production and be carbon neutral. Lifelong learning allows us to learn from our past and keep



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moving forward enabling us to leave our planet a better place for all. This global view and the leadership role we are taking now will allow for a brighter future. The students of today will become the citizens that tomorrow will think beyond the town, province, or country they live in and become stewards of the earth for generations to come.



Mark Thiessen – Superintendent of Schools  
Board of Education of School District No 27



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# 2014 Carbon Neutral Action Report (CNAR)

## - Part 2 ACTIONS

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### Organization Name

School District #27

### Actions Taken to Reduce Emissions

#### **1) Stationary Fuel Combustion, Electricity (Buildings):Indicate which actions were taken in 2014:**

Performed energy retrofits on existing buildings

Yes

Built or are building new LEED Gold or other "Green" buildings.

No

Undertook an evaluation of overall building energy use.

Yes

Please list any other actions taken to reduce emissions from Buildings:

(No response)

#### **2) Mobile Fleet Combustion (Fleet and other vehicles):Indicate which actions were taken in 2014:**

Do you have a fleet?

Yes

Replaced existing vehicles with more fuel efficient vehicles (gas/diesel)

Yes

Replaced existing vehicles with hybrid or electric vehicles

No

Reduced the overall number of fleet vehicles

Yes

Took steps to drive less than last year

Yes

Please list any other actions taken to reduce emission from fleet:

(No response)

### **3) Supplies (Paper):Indicate which actions were taken in 2014:**

Used less paper than previous year

Yes

Used only 100% recycled paper

No

Used some recycled paper

Yes



Used alternate source paper (Bamboo, hemp, etc.)

No

Please list any other actions taken to reduce emissions from paper use:

(No response)

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### Actions Taken to Reduce Emissions - continued

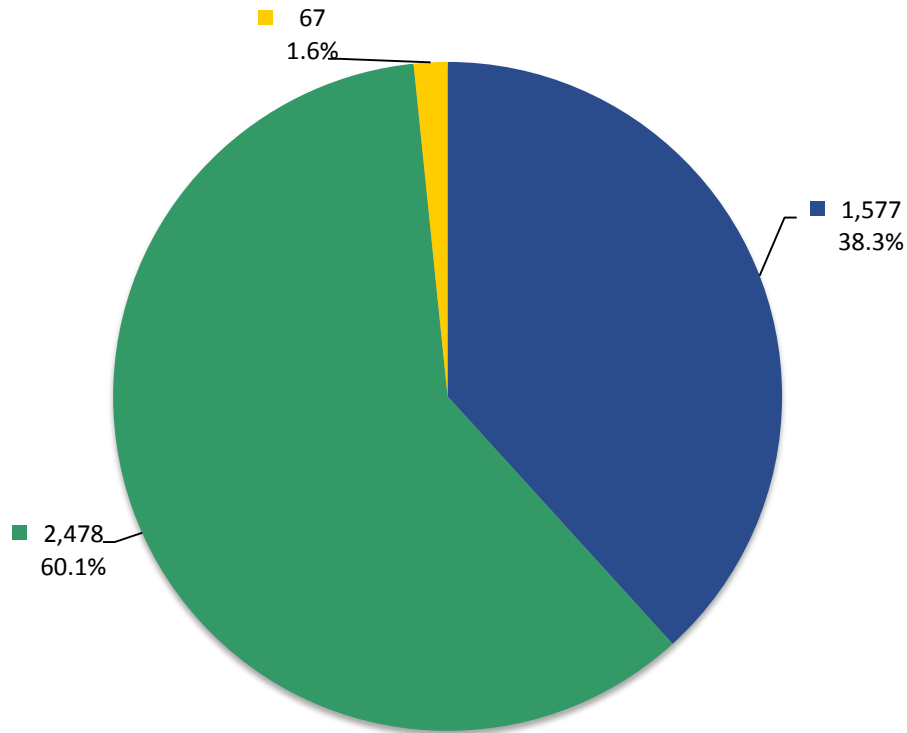
Explain how you plan to continue minimizing emissions in 2015 and future years:

We are undertaking several energy upgrade projects from lighting upgrades, recommissioning projects, DDC upgrades and we are starting a large mechanical upgrade which will include the addition of a 400kw pellet boiler. We are also taking a serious look at our building envelopes to see where our limited funds should be spent.

If you wish to list any other "sustainability actions" outside of buildings, fleet, paper and travel check "yes". This reporting is optional.

No

# School District 27 - Cariboo-Chilcoltin Greenhouse Gas Emissions by Source for the 2014 Calendar Year (tCO<sub>2</sub>e\*)



**Total Emissions: 4,122**

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion (Building Heating and Generators) and Electricity
- Supplies (Paper)

## Offsets Applied to Become Carbon Neutral in 2014 (Generated June 23, 2015 12:09 PM)

Total offsets required: **2,900**. Total offset investment: **\$72,500**. Emissions which do not require offsets: **1,222** \*\*

\*Tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) is a standard unit of measure in which all types of greenhouse gases are expressed based on their global warming potential relative to carbon dioxide.

\*\* Under the *Carbon Neutral Government Regulation of the Greenhouse Gas Reduction Targets Act*, all emissions from the sources listed above must be reported. As outlined in the regulation, some emissions do not require offsets.