



**SCHOOL DISTRICT #81
(FORT NELSON)**

**2014 CARBON NEUTRAL
ACTION REPORT**

Art on the cover was prepared for our Annual Earth Day Event entitled "Be an Earth Warrior"

Artists included:

"We Use Both Sides of the Paper" by S. Harbin, and J. Murrin

"Help the Animals" by G. Dick

We Pick Up Garbage" by F. Coulls

"Recycle, Reduce, Reuse" by A. Waughtal, and J. Picard

EXECUTIVE SUMMARY

School District #81 (Fort Nelson) is one of the smallest school districts in British Columbia, with a student population of less than 800. Staff and students are located in seven locations. Within the municipality of Fort Nelson we have two primary schools with students from Kindergarten to Grade 4, one middle school with students from Grade 5 to 7, and one highschool with students from Grade 8 to 12. As well, we have a maintenance yard and a school board office. In Toad River, two hours north of Fort Nelson, we have a Kindergarten to Grade 12 two-room school, and two teacherages.

School District #81 believes that leadership, in attempting to reduce our carbon footprint, is best demonstrated through action and example.

The School District continued to encourage a culture of responsible stewardship throughout 2014. Our Green Committee work focuses on education and drawing attention to the importance of taking action to reduce our carbon footprint. The Green Committee hosted their Annual Earth Day Event in the local theatre entitled "Be an Earth Warrior". Amazing student entries included posters, videos, animations, photo essays and recycled artwork.

Many exciting, ongoing green activities happen in our individual buildings on a daily basis. These activities include worm composting, recycling of materials, turning off lights when space is not in use, to name a few. These activities, focusing on action, would not take place without the passion and commitment of students, staff, parents, and many education partners.

This year we completed Energy Reports on all of our school district buildings. These reports will be used as a tool to identify projects that will reduce our energy consumption.

We concentrated this year on furnace and light replacement in order to reduce our emissions. Three furnaces were replaced at our rural Toad River School and teacherages, with high efficient models.



In 2013 DDC controls were installed at our local GW Carlson Elementary School. In the summer of 2014 a retrofit at this school replaced eight independent furnaces with high efficient units.

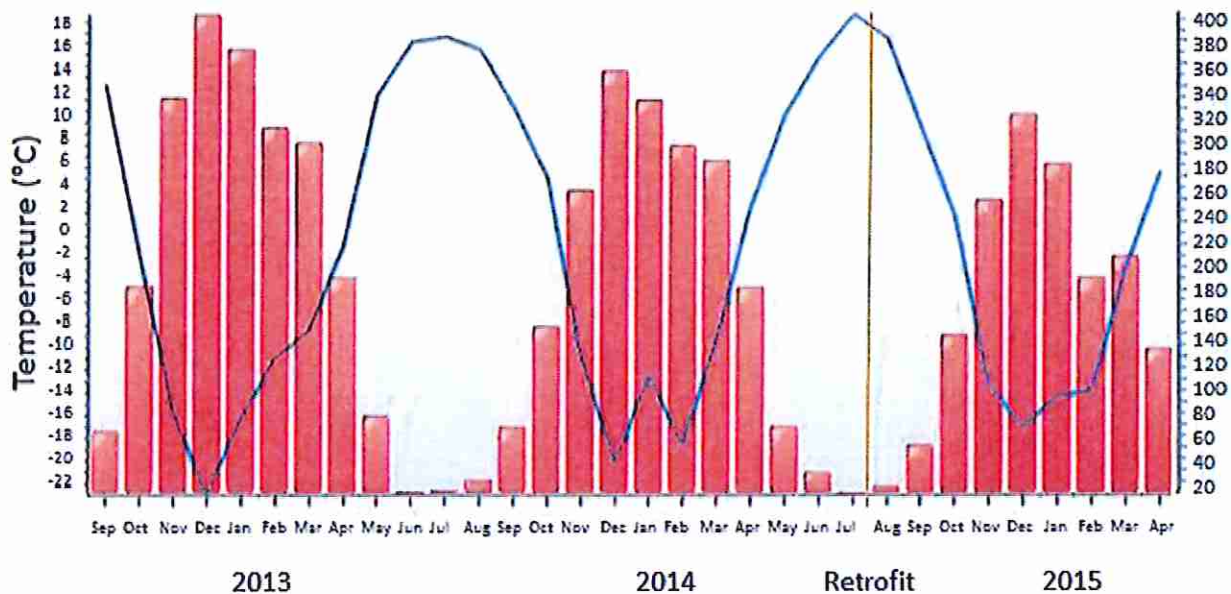
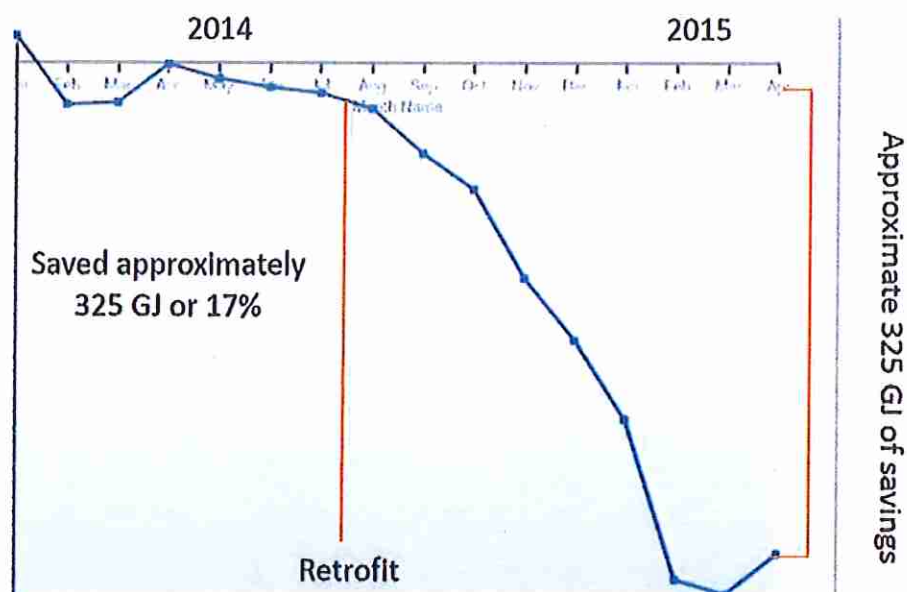


Figure 1 above shows the monthly natural gas (red bars) consumption between 2011 and 2015 alongside the average temperature (blue line) per month.

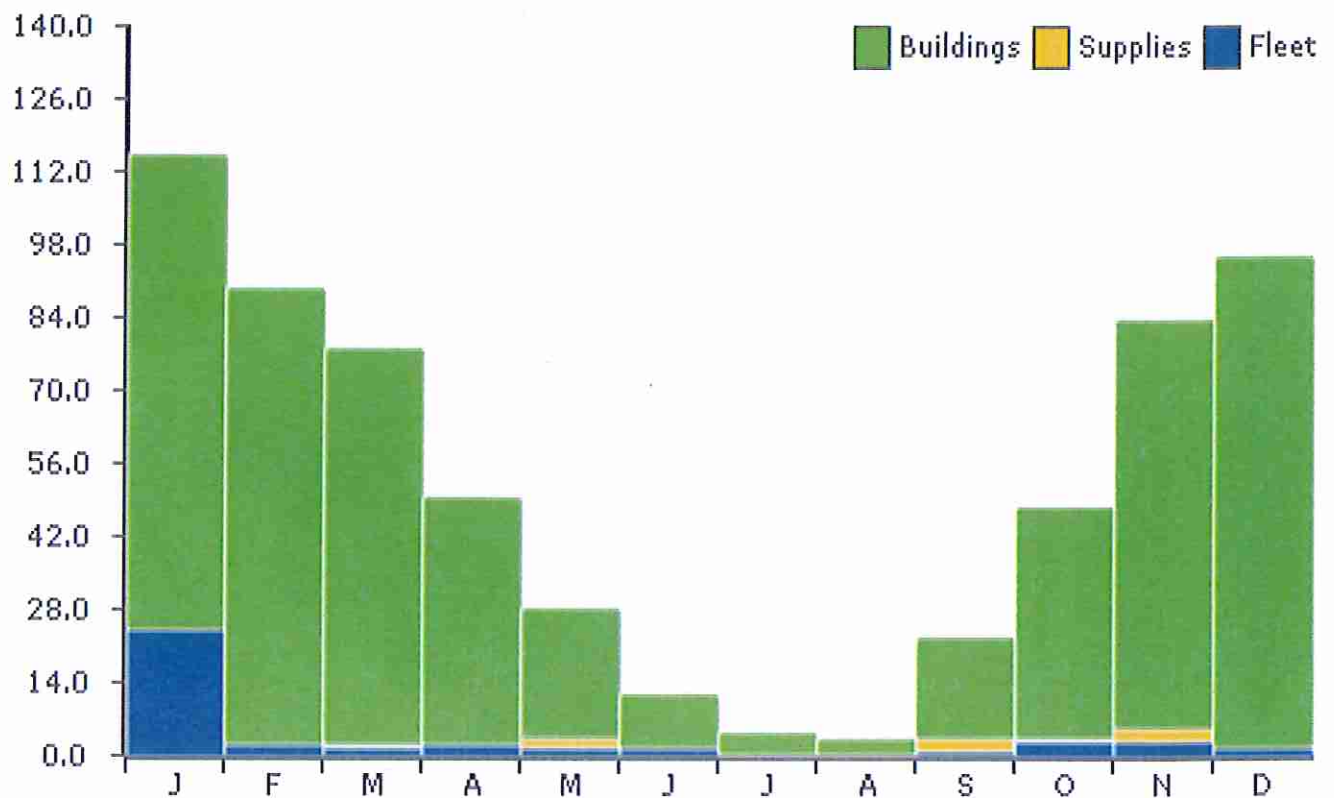
Savings were quantified by comparing “expected” consumption to the actual or “post retrofit” consumption obtained through utility bills. These savings were then added cumulatively and illustrated in the Figure 2 below. This figure shows that there have been savings of 100 GJ throughout February to April of 2015 or approximately 325 GJ, or 17%, of energy savings between August 2014 and April 23, 2015.



Our second concentrated focus was on the change to our lighting. We replaced all of the lights attached to the sides of our buildings with LED lights. These lights are projected to reduce our power usage by 85%.

Total Emissions Calendar Year 2014 School District 81 - Fort Nelson

Metric tonnes
CO2 equivalent (tCO2e)



Click on the bars to view data for each month

Scope 1 – Direct Emissions

Fleet	49.10 tonnes
Stationary Combustion Estimated	5.77
Stationary Combustion Reported	569.51

Scope 2 – Indirect Emissions

Purchased Energy	.19
Purchased Energy Reported	12.44

Scope 3 – Office Paper 9.79

Total 2014 Emissions 647

Offset Exempt 7

Adjustment to GHG's Reported in prior years 73

Total Offset Purchase for 2014 713

School District #81 has a total offset purchase of 713 tonnes of TCO₂E for 2014, resulting in a cost of \$17,825.

This Carbon Neutral Action report for the period January 1, to December 31, 2014 summarizes our emissions profile, the amount of offsets purchased to reach net zero emissions, the actions we have taken in 2014 to reduce our greenhouse gas emissions, and our plans to continue reducing emissions in 2015 and beyond.

By June 30, 2015 School District #81 (Fort Nelson) final Carbon Neutral Action Report will be posted to our website at www.sd81.bc.ca.

Respectfully Submitted,



Diana Samchuck
Superintendent of Schools



Margaret-Anne Hall
Secretary-Treasurer

2014 Carbon Neutral Action Report (CNAR)

- Part 2 ACTIONS

Organization Name

School District #81 (Fort Nelson)

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.

Yes

Undertook an evaluation of overall building energy use.

No

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)

No

Replaced existing vehicles with hybrid or electric vehicles

No

Reduced the overall number of fleet vehicles

No

Took steps to drive less than last year

No

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)

Page 3

Actions Taken to Reduce Emissions - continued

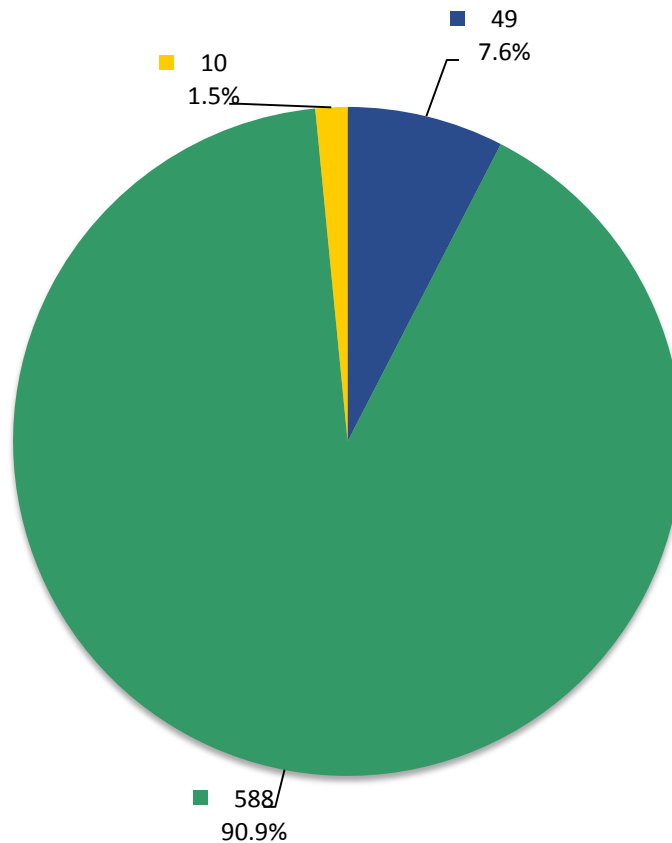
Explain how you plan to continue minimizing emissions in 2015 and future years:

We completed energy studies in all of our buildings this year and intend to use that information to identify areas where we can target funding to continue to minimize emissions.

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 81 - Fort Nelson
Greenhouse Gas Emissions by Source
for the 2014 Calendar Year (tCO₂e*)**



Total Emissions: 647

- 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 3:36 PM)

Total offsets required: **640**. Total offset investment: **\$16,000**. Emissions which do not require offsets: **7** **

*Tonnes of carbon dioxide equivalent (tCO₂e) 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.