



2013 CARBON NEUTRAL ACTION REPORT

MAPLE RIDGE - PITT MEADOWS SCHOOL DISTRICT NO.42



EXECUTIVE SUMMARY

The Maple Ridge – Pitt Meadows school district has continued to work to reduce energy consumption and carbon emissions. In 2008 the school district completed an Energy Management Assessment which entailed a strategic review of our operations aimed at establishing a structured energy management program that will deliver sustainable savings into the future. Annual Facilities Grant (AFG) funds are being allocated to support projects aimed at reducing energy consumption and reduce carbon emissions. This process will continue based on available funding.



Laurie Meston
Acting Superintendent of Schools



2013 GREENHOUSE GAS EMISSION

The Maple Ridge – Pitt Meadows school district produced a total of 3,596 tonnes of greenhouse gas emissions from all sources as reported in SMARTTool.

OFFSETS APPLIED TO BECOME CARBON NEUTRAL IN 2013

Of all the greenhouse gas emissions generated, a total of 3,816 tonnes of emissions offsets have been applied to become carbon neutral for 2013. This total was amended by 227 tonnes based on units consumed in 2012 but not reported previously due to billing issues between SMARTTool and our Utility Manager Program. For 2013, total emission offsets were 3,589.

Of our total emissions, 6 tonnes did not require offsets as they fell under mobile fleet BioCO₂ and are out-of-scope of the Carbon Neutral Government Regulations.

EMISSIONS REDUCTION ACTIVITIES

Actions Taken to Reduce Greenhouse Gas Emissions in 2013

All facilities are undergoing a review to optimize use and realize energy efficiencies. We have conducted a boiler and HVAC review ranking all our equipment on life cycle and efficiency to help us in planning for the future. Through this assessment we applied to the Carbon Neutral Capital Program for a retrofit of the HVAC system at one of our elementary schools. We did not get approval this year but will apply again in future years. Our intent is to conduct annual reviews of our facility utilization.

We have also applied the Hydro for three Opportunity Assessment projects for three secondary schools and are waiting for approval.

Lighting retrofits and upgrades have been incorporated in facility renovations and continue to be a high priority.



OPERATIONAL **CHANGES** IN 2013

DDC controls optimization and tuning has been a focus this year. The optimization of one of our secondary schools has improved consumption by 12%. Schools are provided with consumption figures as a way to promote conservation.



PLANS TO CONTINUE REDUCING GREENHOUSE GAS EMISSIONS 2014 – 2015

- We will continue to work on lighting upgrades in all our facilities.
- We have through our AFG funding undertaken controls upgrades and we will continue these projects based on available funding. We are in the process of upgrading the DDC controls in three of our elementary schools.
- We are reviewing our operational policies in an effort to reduce utility consumption. We are conducting an energy audit to put together a district wide plan and will apply to BC Hydro for project funding.
- Teachers are leading students in school-based energy savings and these lessons will demonstrate the benefits of reducing gas emissions.
- We are working on creating our Long Range Facilities Plan in order to ensure that District needs are met from both an educational and a building efficiency perspective.



2013 CARBON NEUTRAL ACTION REPORT

22225 BROWN AVENUE
MAPLE RIDGE, BC
V2X 8N6

2013 Carbon Neutral Action Report (CNAR)

Survey Form - Part 1 Data

School District No. 42 Maple Ridge-Pitt Meadows

K to 12 Education

Primary Contact Person (GHG Coordinator)

Variable	Response
Primary Contact Person (GHG Coordinator) Name	Rick Delorme
Primary Contact Person (GHG Coordinator) Email	Rick_Delorme@sd42.ca
Primary Contact Person (GHG Coordinator) Phone #	604-466-6154

Secondary Contact Person

Variable	Response
Secondary Contact Person Name	Irena Pochop
Secondary Contact Person Email	Irena_Pochop@sd42.ca
Secondary Contact Person Phone #	604-466-6285

Designated Representative (CNAR Signatory)

Variable	Response
Designated Representative (CNAR Signatory) Name	Flavia Coughlan
Designated Representative (CNAR Signatory) Email	Flavia_Coughlan@sd42.ca
Designated Representative (CNAR Signatory) Phone #	604-466-6225

Self-Certification Checklist signatory

Variable	Response
Self-Certification Checklist signatory Name	Jennifer Hendriks
Self-Certification Checklist signatory Email	Jennifer_Hendriks@sd42.ca
Self-Certification Checklist signatory Phone #	604-466-6281

PSO Data

Variable	Response
PSO Data How many Full Time Equivalent employees (FTEs) do you have within your organization?	1,5611.1
PSO Data How many small vehicles are in your fleet (gators, forklifts, snowmoblies)?	5
PSO Data How many medium-sized vehicles are in your fleet (cars, trucks, SUVs, ambulances)?	38
PSO Data How many large vehicles are in your fleet (school buses, buses, transport trucks)?	None
PSO Data How many buildings does your organization own?	34
PSO Data How many buildings does your organization lease space in?	None
PSO Data What is the total amount of floorspace in your organization (including occupied and unoccupied space)? please report in square meters	154,907
PSO Data Schools, Universities and Colleges only - number of student FTEs as of Dec 31, 2013?	13,782

Green Buildings

How many Green Buildings do you own?

Variable	Response
How many Green Buildings do you own? LEED Non-certified	None
How many Green Buildings do you own? LEED Silver	None

How many Green Buildings do you own? LEED Gold	None
How many Green Buildings do you own? LEED Platinum	None
How many Green Buildings do you own? Other - Boma Best, Living Building, etc.	None

How many Green Buildings do you lease space in?

Variable	Response
How many Green Buildings do you lease space in? LEED Non-certified	None
How many Green Buildings do you lease space in? LEED Silver	None
How many Green Buildings do you lease space in? LEED Gold	None
How many Green Buildings do you lease space in? LEED Platinum	None
How many Green Buildings do you lease space in? Other - Boma Best, Living Building, etc.	None

How many Green Buildings do you have under construction (as of Dec 31, 2013)?

Variable	Response
How many Green Buildings do you have under construction (as of Dec 31, 2013)? LEED Non-certified	None
How many Green Buildings do you have under construction (as of Dec 31, 2013)? LEED Silver	None
How many Green Buildings do you have under construction (as of Dec 31, 2013)? LEED Gold	None
How many Green Buildings do you have under construction (as of Dec 31, 2013)? LEED Platinum	None
How many Green Buildings do you have under construction (as of Dec 31, 2013)? Other - Boma Best, Living Building, etc.	None

In 2013, the school district had an engineering firm assess all boilers and HVAC systems in our facilities. The resulting report included life cycle and efficiencies assessments, rating of every unit and recommendations for future investments in this area with the associated estimated budget required for each project. This report will guide us going forward in allocating our resources towards the units in most need of replacement or upgrading.

This year, we applied through the Carbon Neutral Capital Program for one lighting upgrade at a secondary school and one upgrade of an elementary HVAC system. We did not receive funding but will apply again in future years. We also submitted a capital request to the Ministry of Education for an HVAC upgrade at one of our secondary schools and are awaiting approval of that project.

One of the barriers we have in our district is not having an individual dedicated to implementing emissions reduction initiative. Although funding is a major issue, finding time to focus on the program is our greatest barrier.

Our organization does not have a specific emissions target, but operates on a continuous improvement philosophy.

Our focus going forward is to proceed with a detailed energy audit. We hope that this audit would justify the hiring of an Energy Manager with funding from BC Hydro. We have also been in contact with Fortis to determine if the school district qualifies for an Energy Specialist funded by Fortis.

2013 Carbon Neutral Action Report (CNAR)

Part 2 Actions

Actions Taken to Reduce Emissions:

1) Stationary Fuel Combustion, Electricity (Buildings): Indicate which actions were taken in 2013:

Working with a consultant, we have conducted a boiler and HVAC audit of all of our facilities. This audit has ranked all our equipment on life cycle and efficiency, and will guide our planning for future projects in the district.

Through this assessment we have applied to the Carbon Neutral Capital Program for a retrofit of the HVAC system at one of our elementary schools. We did not get approval this year but will resubmit in the future. We also applied to the Ministry of Education on our Five Year Capital Plan for funding to retrofit one of our secondary schools HVAC systems, and are still waiting for approval.

Finally, we have also applied to BC Hydro for three Opportunity Assessment Projects for three secondary schools and are waiting for approval.

2) Mobile Fleet Combustion (Fleet and other vehicles): Indicate which actions were taken in 2013:

We do have a fleet consisting of maintenance vehicles and van type school buses for secondary schools. We have upgraded one of our old dump trucks to a new efficient diesel unit.

We did apply to the Carbon Neutral Capital Program to purchase three electric cars to replace gas vehicles for our Maintenance Department but did not receive funding. Employees are continually reminded to limit mileage, consolidate daily work assignments and travel together when possible.

3) [Supplies \(Paper\): Indicate which actions were taken in 2013:](#)

There was a four percent reduction in paper consumption in the district. We purchase thirty per cent post-consumer recycled paper.

We still configure network printers to two-sided coping, and strive for and encourage paperless meetings. The district has also developed a Parent Portal to serve as a communications channel between parents, schools and the school district. This portal eliminates the need for paper newsletters and all printed notices of events.

We are currently in the process of engaging an engineering firm to complete an energy audit of our facilities, and hope to complete the study this year. We also hope this audit will justify the hiring of an energy manager with funding from BC Hydro.

[Actions to Promote Sustainability and Conservation:](#)

[The following items are promoted by the District and are being developed:](#)

Virtual Meeting Technology Installed web-conferencing software (e.g., Live Meeting, Elluminate, etc.) is promoted and used in some degree.

Desktop web-cameras are available to staff on request.

The district encourages alternative travel to meetings (e.g. bicycles, public transit, walking), including carpooling.

The district is in the process of forming a group of educators and leaders to champion Education and Awareness, and has created Green, Sustainability, Energy Conservation, or Climate Action Teams. These teams will promote behaviour change education and training for the district.

Senior Team is looking into a recognition program to provide sustainability/ green awards.

The director of maintenance will provide education to staff about the conservation of water, energy, and raw materials.

The district has implemented a hazardous waste reduction and disposal strategy that encompasses hazardous waste, batteries, paints, fluorescent bulbs, and electronics (including computer parts and monitors).

Finally, the district has incorporated minimum recycled content standards into procurement policy for consumable, non-paper supplies (e.g. writing instruments, binders, toner cartridges, etc.).

2013 Carbon Neutral Action Report (CNAR)

- Part 2 ACTIONS:

Actions Taken to Reduce Emissions

1) Stationary Fuel Combustion, Electricity (Buildings): Indicate which actions were taken in 2013:

Working with a consultant we have conducted a boiler and HVAC audit of all our facilities. This audit has ranked all our equipment on life cycle and efficiency. This will guide our planning for future projects in the District.

Through this assessment we have applied to the Carbon Neutral Capital Program for a retrofit of the HVAC system at one of our elementary schools. We did not get approval this year but will resubmit in the future. We also applied to the Ministry on our five year capital plan to retrofit one of our secondary schools HVAC systems and are still waiting for approval.

We have also applied to Hydro for three Opportunity Assessment projects for three secondary schools and are waiting for approval.

2) Mobile Fleet Combustion (Fleet and other vehicles): Indicate which actions were taken in 2013:

We do have a fleet consisting of Maintenance vehicles and van type school buses for Secondary schools. We have upgraded one of our old dump trucks to a new efficient diesel unit.

We did apply to the Carbon Neutral Capital Program to purchase three electric cars to replace gas vehicles for our maintenance department but did not receive funding. Employees are continually reminded to limit mileage, consolidate daily work assignments and travel together when possible.

3) Supplies (Paper): Indicate which actions were taken in 2013:

There was a four percent reduction in paper consumption in the District. We purchase thirty percent post-consumer recycled paper.

We still configure network printer to two sided coping and the use of paperless meeting. The District has developed a Parent Portal to serve as a communications media between parents, schools and the District to eliminate the newsletter and notices of events.

We are in the process of engaging an engineering firm to complete an energy audit of our facilities and hope to have the study done this year. We hope that this audit would justify the hiring of an Energy Manager with funding from BC Hydro.

Actions to Promote Sustainability and Conservation:

The following items are promoted by the District and are being developed:

Virtual Meeting Technology Installed web-conferencing software (e.g., Live Meeting, Elluminate, etc.) is promoted and used in some degree.

Desktop web-cameras are available to staff on request.

The District encourages alternative travel to meetings (e.g., bicycles, public transit, walking) including carpooling.

The District is in the process of forming a group of educators and leaders to champion Education and Awareness and created Green, Sustainability, Energy Conservation, or Climate Action Teams. These teams will promote behaviour change education/training for the District.

Senior team is looking into a recognition program to provide sustainability/green awards.

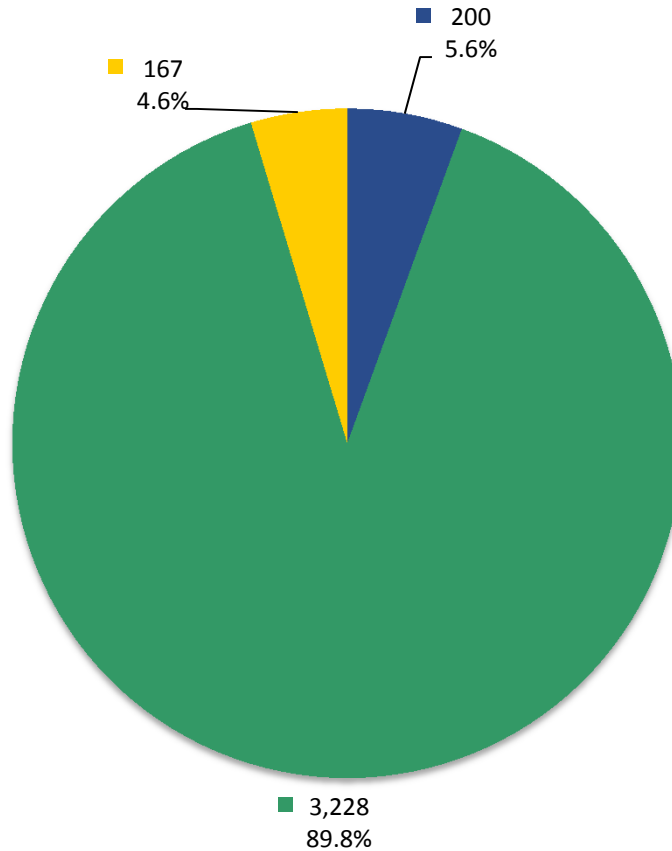
The Director of Maintenance will provided education to staff about the conservation of water, energy, and raw materials.

The District has implemented a hazardous waste reduction and disposal strategy including hazardous waste, electronics including computer parts and monitors, batteries, paints, and fluorescent bulbs.

Actions to Promote Sustainability and Conservation - Optional (continued)

The District has incorporated minimum recycled content standards into procurement policy for consumable, non-paper supplies (e.g., writing instruments, binders, toner cartridges, etc.).

School District 42 - Maple Ridge Greenhouse Gas Emissions by Source for the 2013 Calendar Year (tCO₂e*)



Total Emissions: 3,596

- 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 2013 (Generated May 21, 2014 3:42 PM)

Total offsets required: **3,589**. Total offset investment: **\$89,725**. Emissions which do not require offsets: **6** **

*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.