

VCC 2019 Carbon Neutral Action Report

SUBMITTED UNDER THE CARBON NEUTRAL GOVERNMENT REGULATION OF THE B.C. GREENHOUSE GAS REDUCTION TARGETS ACT VANCOUVER COMMUNITY COLLEGE

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ABOUT VCC

Located in the heart of the city, Vancouver Community College (VCC) offers academic, cultural, and social environments that inspire relevant real-world training. Our on campus facilities - including gourmet restaurants, an auto shop, and salon and spa - allow students to hone their skills and training while providing high-quality lower-cost services to the Downtown and East Vancouver communities.

VCC Mission Statement

Vancouver Community College serves a diverse urban community by providing excellent programs and services that prepare learners for ongoing education, direct entry into employment, career advancement and greater participation in the community.

VCC Mandate

Vancouver Community College responds to existing and emerging community needs. In co-operation with other educational institutions, licensing and accrediting bodies, employers, community groups and governments, the College offers flexible and responsive instruction. Our accessible and transferrable programs help students reach their personal, educational and professional goals.

Vancouver Community College is committed to delivering innovative instruction in developmental education, adult basic education, English language programs, special education, vocational, career, technical, academic, and continuing education programs. We use creative instructional methods in concert with professional support services which are integral to the success of all students. The College champions a learning environment that maximizes the educational experience by continually improving its resources, technology and facilities.

DECLARATION STATEMENT

This Carbon Neutral Action Report for the period January 1, 2019 to December 31, 2019 summarizes Vancouver Community College's (VCC) emissions profile, the total offsets to reach net-zero emissions, the actions taken in 2019 to reduce its greenhouse gas emissions and plans to continue reducing emissions in 2020 and beyond.

By June 30, 2020, Vancouver Community College's final 2019 Carbon Neural Action Report will be posted on our website at www.vcc.ca

EXECUTIVE SUMMARY

Vancouver Community College (VCC) believes that a healthy environment is essential for the well-being of present and future generations. We have focused on protecting the natural environment by reducing our day-to-day impacts and by building a more sustainable community through our program offerings. By demonstrating leadership and accountability through environmentally conscious decision-making in all aspects of our operations, we hope to inspire our students, staff and graduates to extend these sustainable practices beyond the classroom, further motivating others in their homes, communities, and workplaces.

As part of VCC's 2011-2014 Strategic Pan, we committed to seeking innovative and improved practices that reduced our greenhouse gas (GHG) emissions. The college set a GHG reduction target of 20% below fiscal year 2010/2011 by March 2018. We surpassed this goal, reporting a total reduction of 46% by March 2018. As of March 2020, we have achieved a total reduction of 51.6% in GHG emissions compared to 2010/2011 levels.

Over the past eight years, VCC has participated in BC Hydro's Energy Management Program and has made great strides in achieving our environmental sustainability goals. In an effort to continue our energy reduction achievements, VCC developed a three-year Strategic Energy Management Plan (SEMP) to identify opportunities to further reduce our energy consumption.

Working across our college campuses with the direct support and participation of our staff, faculty and students, we have achieved major milestones:

- Over \$2,000,000 in energy cost avoidance since 2010.
- By the end of March 2020, VCC's energy saving of approximately 45,000,000 ekWh is equal to: Annual Energy Use of 2,018 BC Households¹

More information about our 2019 SEMP can be found here: https://www.vcc.ca/about/college-information/reports-and-publications/

VCC is a carbon neutral institution. Following the Carbon neutral Government Regulation of BC's Greenhouse Gas Reduction Targets Act, VCC measures and reports GHG emissions to the BC Climate Action Secretariat, and purchases credits to offset all remaining GHG emissions that cannot be reduced through our implemented energy conservations initiatives. In addition to these requirements, the Carbon Neutral Action Report (CNAR) is prepared each year by VCC.

¹ In 2015, the average energy use for a household (electricity and Fuel) was 80.3 eGJ (22,300 ekWh) https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=2510006001

ACTIONS TAKEN TO REDUCE GHG EMISSIONS IN 2019

Since 2013, VCC has partnered with BC Hydro through the Energy Manager Program and has developed and implemented the Strategic Energy Management Plan (SEMP). The SEMP supports VCC's commitment to increase energy efficiency and conservation by providing a framework for reducing energy consumption and its associated environmental impacts.

Following the achievement of our original GHG reduction target set for March 2018, the SEMP includes an updated energy reduction target and an action plan to ensure our success. Through the implementations of cost-effective management initiatives identified in the SEMP, VCC is now working toward reducing campus energy intensity in existing buildings by 45% by the end of fiscal year 2020/2021 compared to 2010/2011 fiscal year levels.

During the last fiscal year, VCC completed the following projects to reduce energy use and GHG emissions:

Broadway Campus

ADDITION OF VARIABLE FREQUENCY DRIVES

Twelve variable frequency drives (VFD's) were installed for the air handling units' motors resulting in an annual electricity reduction of 118,500 kWh.

Downtown Campus

LIGHTING UPGRADE

VCC implemented and completed a lighting upgrade for Downtown Campus in March, 2020. This upgrade included replacing all T8 fluorescent luminaires with LED technology, resulting in an annual energy savings of 307,000 kWh.

FLUID COOLER REPLACEMENT

A fluid cooler which was at the end of its useful life was replaced with one equipped with premium efficiency motors and variable frequency drive. The electricity savings is estimated to be 18,000 kWh per year.

 ADDITION OF HEAT PUMPS TO DIRECT DIGITAL CONTROL SYSTEM
 Occupancy sensors were installed in various classrooms and 23 heat pumps were added to the existing Direct Digital Control (DDC) system. Programmed to operate with a weekly schedule to reduce energy use when spaces are unoccupied, the energy reduction is estimated to be 175,000 kWh per year.

Emission Reduction Initiatives

ELECTRIC VEHICLE

VCC invested in an Electric Vehicle for staff and operations with the goal of reducing our operational GHG emissions from mobile fuel. A Level 2 charging station was also installed in February 2020.

This station has a dedicated power supply to ensure our new EV can reliably support daily activities and operations. For any VCC staff and faculty with EVs that visit campus, we have allocated priority parking stalls.



Energy Conservation and Awareness Campaign

As a participant of the BC Hydro Energy Wise Network (EWN) Program, VCC continues to engage staff and students through behaviour change campaigns focused on energy conservation. Since our first year, VCC has run a number of successful campaigns such as Lights Off, Green On, Holiday Shutdown, Take the Stairs and Bundle Up.

With the support of the EWN and program coaches, VCC successfully implemented two behaviour change campaigns in 2019. The first campaign, "Lights Off, Green On", began in November. Using updated light switch stickers and matching campaign materials across campus, students and staff were prompted to turn lights off when they left classrooms and meeting rooms.

The second campaign, "Holiday Shutdown", ran during December before the winter break. Targeting VCC staff, departments were incentivized to reduce phantom power during the holidays by unplugging unnecessary equipment, cords and appliances. A total of six pizza parties were awarded across VCC departments to celebrate participants for unplugging before the holiday season.

In addition to these two campaigns, high capacity electric space heaters at Broadway and Downtown campuses were replaced with low capacity electric radiators reducing the electric energy consumption in winter months.

These behaviour changes and actions drove total annual energy use down a further 0.5% this past year.

REDUCING GHG EMISSIONS IN 2020 AND BEYOND

Building on our successful energy reduction projects and behaviour change campaigns, VCC will continue to engage staff, students, and faculty through future initiatives across both campuses. In the upcoming years, our plan is to rollout more energy reduction projects and behaviours change campaigns that will further reduce our annual GHG emissions including:

Broadway Campus

- LED Lighting Upgrade, BWY Building A Classrooms/Labs
- Domestic Hot Water System Electrification
- Electric Vehicle Charging Station

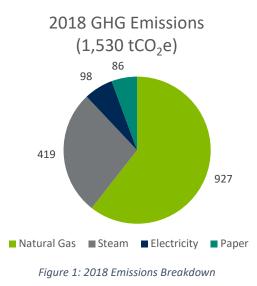
Downtown Campus

• LED Lighting & Controls Upgrade, DTN Dunsmuir Hallways

EMISSIONS SUMMARY

As per the Directive issued March 31, 2020, each PSO will use their 2018 GHG Emissions as a placeholder for the purposes of their 2019 CNAR.

The total GHG emissions reported and offset in 2018 was 1,530 tCO₂e. Approximately 94% of our reported GHG emissions is a result of our building energy use including natural gas, steam and electricity. We have also reported our paper use, which totalled 6% in 2018.



Compared to 2017 levels, VCC has decreased total organizational emissions by 14% year-over-year and has achieved a 50% reduction in emissions compared to our 2011 baseline.

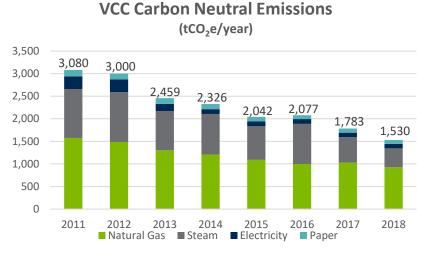


Figure 2: Historical Annual Emissions 2001-2018

Fugitive emissions from cooling and mobile fuel emission from fleet vehicles is estimated to be less than 0.01% of annual GHG emissions. These levels do not meet the materiality threshold necessary to be included in the annual data collection and reporting.

Emissions and Offset Summary Table

VCC GHG EMISSIONS AND OFFSETS FOR 2018 (tCO2e)

As per the Clean BC Implementation Climate Action Secretariat Directive, issued March 31, 2020, each PSO will use their 2018 GHG Emissions as a placeholder for the purposes of their 2019 CNAR.

Total Emissions (tCO ₂ e)	1530
Total BioCO ₂	0
Total Offsets (tCO ₂ e)	1530
Offset Investment (\$25 per tCO ₂ e) [Total Offsets x \$25/tCO _{2e}]	1530 x \$25

Retirement of Offsets

In accordance with the requirements of the Climate Change Accountability Act and Carbon Neutral Government Regulation, Vancouver Community College is responsible for arranging for the retirement of the offsets obligation reported above for the 2019 calendar year, together with any adjustments reported for past calendar years (if applicable).

The Organization hereby agrees that, in exchange for the Ministry of Environment and Climate Change Strategy (the Ministry) ensuring that these offsets are retired on the Organization's behalf, the Organization will pay within 30 days, the associated invoice to be issued by the Ministry in an amount equal to \$25 per tonne of offsets retired on its behalf plus GST.

Executive Sign-Off:

Signature

020 Date

Ajay Patel

President & CEO

Name (please print)

Title

Lights Off, Green On

Behavioral Campaign



Creation of good habits is the foundation of VCC energy savings.

The goals were to reinforce and create behavioural habits that will help VCC in their energy conservation goals and greenhouse reduction targets. The energy savings team and custodian staff conducted light audits during the weekends in order to identify the areas that constantly left lights on.

Based on the result, the campaign was reinforced in the areas/departments that needed an increase in energy savings behaviours. Those participants that went above and beyond to reach the goals during the campaign received VCC insulated coffee mugs.

The Energy Wise Network was launched in 2016 to help organizations in their energy engagement programs. The network is made up of Advanced Education, Government, Schools (K-12), Hospitality, Municipalities, Property Management, and Retail sectors

Introduction

This winter, the college took the opportunity to remind students, and faculty the importance of turning the lights off when not in use.

Campaign Goals

To reduce the amount of lights left on during weekends and after hours.

Campaign

From December 1st, 2019, to January 31st, 2020, the energy team implemented the Lights Off, Green On campaign.

Activities

Dashboard images. Updated light switch stickers. Lights Off, Green On employee contest.

Learn more

Diana Cabrero Purata Facilities Coordinator energysaving@vcc.ca

We're working together to help B.C. save energy.





Holiday Shutdown

Energy Savings Campaign



Last year VCC staff responded very well to the shutdown contest.

Facilities Management decided to run the contest again this year and reward the departments that participated.

The goal is to reinforce and create behavioral habits that will help VCC in their energy conservation goals and greenhouse reduction targets.

It is important for the energy savings team to build community, reinforce social activities, and create healthy working environments.

The staff response to this limited-time contest was impressive. The Facilities Coordinator enjoyed receiving participants' pictures and gives many thanks to the Marketing Department.

Introduction

The holiday closure was seen as an opportunity to shut off the heating, ventilation and HVAC on both campuses in order to achieve major savings.

Campaign Goals

To reduce the energy consumption during college closure from Dec. 24, 2019 to Jan. 01, 2020

Campaign

VCC community to participate in the Holiday Shutdown Campaign. Before leaving for the Holidays, staff were asked to switch off electronics, turn off lights, unplug small appliances and close windows and blinds.

Activities

Dashboard images. Shutdown picture submittal contest; Pizza parties to celebrate participants

Learn more

Diana Cabrero Purata Facilities Coordinator energysaving@vcc.ca

The Energy Wise Network was launched in 2016 to help organizations in their energy engagement programs. The network is made up of Advanced Education, Government, Schools (K-12), Hospitality, Municipalities, Property Management, and Retail sectors

We're working together to help B.C. save energy.







More prevalent than ever before, our future generations are looking upon us to address climate change and the anticipated devastating impacts, if we continue our current levels of greenhouse gas (GHG) emissions. The VCC community has been working with sustainability experts and other key stakeholders for nearly a decade to develop and continuously refine a Strategic Energy Management Plan and set out a framework for reducing energy consumption.

As of April 2019, we have cut greenhouse gas emissions from both Broadway and Downtown campuses by nearly half since 2010. However, we know we still have a lot of work ahead of us to reach carbonneutral status by 2050. Below are our GHG emissions reduction targets as compared to the BC government Bill 44 targets:

	Bill 44 Targets	VCC Targets
2020	33%	50%
2025		60%
2030	40%	75%
2040	60%	85%
2050	80%	100%

In our commitment to be an innovative leader for experiential learning, we want to champion initiatives that address the biggest human crisis of our generation.

Our plans for reaching 100% greenhouse gas emissions reduction by 2050 include, but are not limited to:

- 1. Fuel switching and use of heat pumps for heating
- 2. Electrification of the make-up air units and culinary arts kitchen equipment
- 3. Connecting to the Neighbourhood Energy Utility district energy
- 4. Installing Photovoltaic (PV) solar panels

Through the support all staff, faculty and students, we hope to provide an environment where sustainability simply becomes a part of VCC's identity. We are all part of the net zero plan.

Facilities Management



VCC achieves two million dollars

in energy cost avoidance

Vancouver Community College (VCC) is the oldest community college in British Columbia. With over 140 certificate and diploma programs, it is also the largest public community college, serving over 26,000 students each year at their three campuses: Broadway, Downtown and Annacis Island.

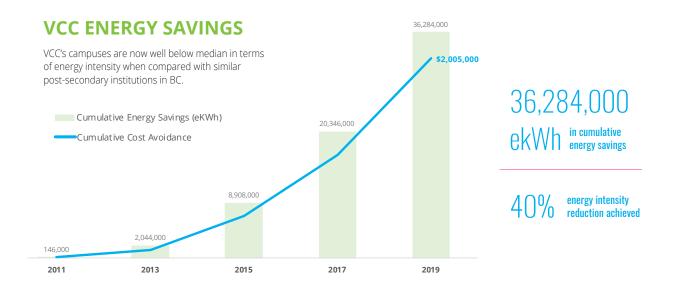
Over the last nine years, VCC has proudly exceeded two million dollars in total energy cost avoidance. While VCC had set the goal of reaching 25% below 2010 levels by 2020, they have already well exceeded this goal with a 40% reduction in energy intensity. These figures represent actual energy savings of 36,284,000 ekWh, which is equivalent to energy consumption of 1,650 households in British Columbia for an entire year. VCC has also cut greenhouse gas emissions from both Broadway and Downtown campuses by nearly half since 2010.

Reducing carbon footprint through innovative practices

As part of their overall Strategic Plan, VCC committed to seeking innovative and improved practices that reduce their carbon footprint. VCC has since undertaken significant projects to change the way energy is used on campuses.

Major upgrades undertaken include LED lighting installation for exterior and parking lights, adding occupancy sensors and digital controls to campus classrooms, and implementing energy saving measures from continuous optimization programs for heating and cooling systems. These projects have, in part, helped keep VCC's campuses well below median in terms of energy intensity when compared with similar post-secondary institutions in BC. Going forward, projects being reviewed include electrification (kitchen equipment, ventilation and domestic hot water heating systems), demand control ventilation, and photo-voltaic system installation.





Creating a culture of energy conservation

VCC has also worked to integrate energy conservation and sustainability into the culture on campus. VCC is part of BC Hydro and FortisBC's Energy Wise Network program, which consists of both public and private sector organizations committed to saving energy through behaviour change and engagement.

Over the years, VCC's energy team has collaborated with IT staff to update computer settings to switch to energy saving modes while the user is away. VCC's "Take the Stairs" campaign encouraged people on campus to skip the elevator, thereby saving energy and staying active. In early 2018, VCC's Facilities Management Team launched an Energy Saving Ideas Competition inviting staff to submit their ideas for saving energy on their campuses.

A greener future

Today, with the achievement of over two million dollars of energy cost avoidance and with the college handily meeting energy reduction targets ahead of schedule, VCC is proud to be making progress towards a greener future.



Created with support from BC Hydro's Energy Manager program. Savings calculations and case study prepared by Prism Engineering.





Carbon Neutral Action Report Survey - 2019

Public sector organizations (PSOs) are required to complete this survey, in addition to a Carbon Neutral Action Report (CNAR) as mandated by BC's <u>*Climate Change Accountability Act*</u> and the <u>Carbon Neutral Government Regulation</u>.

Due to the COVID-19 pandemic, the following <u>Directive</u> was issued on March 31, 2020. Certain deadlines were also extended for the 2019 reporting year (see below).

March 31, 2020 Directive:

Under my authority as the Director for the purposes of the Act, and under the authority delegated to me in Section 6 of the Carbon Neutral Government Regulation, I hereby direct that all ministries and Public Sector Organizations covered by the Carbon Neutral Government requirement shall use their 2018 GHG emissions as a temporary estimate for their actual 2019 GHG emissions, for the purposes of the 2019 Carbon Neutral Action Reports and 2019 Carbon Neutral Government reporting required under the Climate Change Accountability Act.

Neil Dobson, Executive Director, Clean BC Implementation Climate Action Secretariat

Although 2018 emissions data will be used as a placeholder for 2019, all other (qualitative) components of the CNAR and CNAR Survey are to be completed with information from 2019 (e.g., actions taken or planned to reduce emissions). The only change to the survey is that the deadline was extended by one month to June 30, 2020.

This survey is divided into two parts:

Part 1 - Will be made public on the Climate Action Secretariat (CAS) <u>website</u> after June 30, 2020; however, it will not be appended directly to each individual PSO CNAR as was done in previous years. This section collects details about actions taken or planned to reduce emissions and is intended to supplement the legislative requirements in your CNAR.

Part 2 - Will NOT be made public. Information you provide in this section is important and will be used internally to help CAS staff with planning for emissions reduction and climate change adaptation initiatives. Although not required, PSOs are highly encouraged to complete Part 2.

Note: Survey progress can be saved at any time by clicking the "Save and continue later" button at the bottom of each page. A new window will open and you will be asked to provide your name and email. An email will be sent to you from <u>Carbon.Neutral@gov.bc.ca</u> with the subject line: "Questionnaire Link", which will include a hyperlink for the "Project: Carbon Neutral Action Report Survey – Broader Public Sector 2019". You can then continue responding at another time or email the hyperlink to a colleague to complete remaining section(s).

May 29, 2020	 The final, signed version of the CNAR (or Small Emitters Form) must be submitted by email to: <u>Carbon.Neutral@gov.bc.ca</u>
June 30, 2020*	 Ministry of Environment and Climate Change Strategy must post a final CNAR for each organization on the BC Government's CNG <u>website</u> and each PSO is encouraged to post the report on their website. The <u>CNAR Survey</u> (optional for Small Emitters) must be completed and submitted online. *Deadline extended from May 29, 2020. <u>All offset invoice payments must be submitted to CAS</u>.
Sept 30, 2020*	Clean Government Reporting Tool (CGRT) Data Entry must be completed for the 2019 reporting year.

	*Deadline extended from April 30, 2020.
Oct 15, 2020*	 Self-Certification checklist must be completed, signed and submitted by email to: <u>Carbon.Neutral@gov.bc.ca</u>. *Deadline extended from May 15, 2020.

*See the <u>Carbon Neutral Government – Program Requirements website</u> for more information on program requirements, timelines and templates.

PART 1 - Included as part of your public CNAR report.

Reminder that Part 1 will be made public on the CAS website.

Contact Name:

Diana Cabrero Purata

Contact Email:

dcabreropurata@vcc.ca

Organization Name:

Vancouver Community College

Role – Please select the best category for your current role with your organization. If more than one individual completed the survey, multiple categories may be selected:

Facilities/Operations Manager/Coordinator

Please select your sector:

Post Secondary (PS)

Stationary Sources (e.g. Buildings, Power Generators): Fuel Combustion, Electricity use, Fugitive Emissions.

Actions taken by your organization in 2019 to support emissions reductions from buildings

Do you have a strategy to reduce emissions from stationary sources?

Yes

Whether you have a strategy or not, briefly describe your organization's plans to continue reducing emissions from stationary sources:

Over the medium-term term (1-5 years)

- 1. Upgrading lighting systems for Broadway and Downton campuses.
- 2. Electrification Project (replacement of gas-fired domestic hot water heater with heat pump for Broadway campus.
- 3. Add variable frequency drive (VFD) for fluid coolers for Broadway and Downton campuses.

Over the long term (6-10 years)

1. Electrification of makeup air units serving Culinary Arts kitchens for the Downtown campus (replacement of gas-fired units with heat pumps).

- 2. Installing photovoltaic (PV) panels for Broadway campus.
- 3. Replacement of gas-fired kitchen equipment with electrical units.
- 4. Installing centralized heat pumps for Downtown campus to reduce purchased steam.

Please describe your strategy's goals (if any) related to energy audits.

Our target:

- 1. To reduce energy use by 45% below 2010/2011 base year by March 2021.
- 2. To reduce GHG emissions by 50% below 2010/2011 base year by March 20201.

What % on average of your building portfolio has an energy audit completed each year (if any)?

20%

Please describe your strategy's goals (if any) related to building retrofits.

Since 2013, Vancouver Community College has been conducting energy savings retrofits on lighting and DDC Systems. In addition, upgrades to the HVAC control systems have been implemented. VFDs have been installed for major air handling units.

What % on average of your building portfolio is retrofitted each year in the following categories (if any) - click here for further information:

10%

Minor retrofits (e.g. low cost, easy to implement measures including caulking, lighting, adding roof insulation, etc.)

Lighting upgrades.

Major retrofits (e.g. replacing windows and doors, equipment replacement such as boilers, etc.)

None.

Deep retrofits (e.g. replacing roof, replacing the heating, ventilation and air-conditioning system with a renewable technology like a ground-source heat pump, etc.)

None.

Please describe your strategy's re/retro-commissioning goals (if any)?

VCC is interested to conduct a recommissioning project every 5 year.

What % on average of your building portfolio do you recommission each year?

None

Do you keep records of Refrigerant gases1 category and refilling volumes?

[1] Fugitive emissions from stationary cooling equipment are attributed to the leakage and loss of HFC and PFC based coolants from air conditioning and commercial type refrigeration systems. Coolant loss can occur during the manufacturing, operation, and disposal of such equipment. Gases that may be reported via CGRT include HFC R-134, HFC R-134a, HFC R-404a, HFC R-407c, HFC R-410a.

No

What, if any, mitigation approaches have been considered? Please describe.

We are looking into mitigation approaches in the near future.

How many newly constructed buildings received at least LEED Gold certification in 2019?

Not applicable.

How many newly constructed buildings did not receive LEED Gold certification?

Not applicable.

Please explain why LEED Gold certification was not obtained for those new buildings.

Not applicable.

Other actions? Please describe briefly:

None.

Mobile Sources (Fleet Vehicles, Off-road/portable Equipment): Fuel Combustion:

Actions taken by your organization in 2019 to support emissions reductions from mobile sources?

Do you have a strategy to reduce emissions from mobile sources?

Yes

Whether you have a strategy or not, briefly describe your organization's plans to continue reducing emissions from mobile sources:

Over the medium-term term (1-5 years)

Installing electric vehicle charging stations for broadway campus.

Over the long term (6-10 years)

Purchasing electric vehicles.

How many fleet vehicles did you purchase from the following categories:

Electric Vehicle – EV - (e.g., Nissan Leaf, Chevy Bolt)

1

"Plug In" Electric Vehicle - PHEV (e.g., plug-in Prius, Chevy Volt)

0

Hybrid vehicle – HEV – non "Plug In"- (e.g., Toyota Highlander Hybrid)

0

Hydrogen fuel cell vehicle

0

Natural gas/propane	
0	
Gas/diesel vehicle	

0

If you purchased new gas/diesel vehicles, can you briefly explain why vehicles from the other categories were not chosen?

Not applicable.

Actions taken by your organization in 2019 to support emissions reductions from mobile sources? (Continued)

How many existing EV charging stations does your organization have in each category:

Level 2?
2
Level 3?
0
How many level 2 stations (if any) are specifically for your fleet vehicles? As defined as Level 2 stations only your organization's fleet vehicles may use
1
How many level 3 stations (if any) are specifically for your fleet vehicles? As defined as Level 3 stations only your organization's fleet vehicles may use

How many EV charging station(s) did you install in 2019 in each category:

Level 2?	
2	
Level 3?	
0	
How many level 2 stations (if any) were installed specifically for your fleet vehicles? As defined in the previous section	

1

0

How many level 3 stations (if any) were installed specifically for your fleet vehicles? As defined in the previous section

0

Please briefly describe any other related actions, (e.g. charging station feasibility studies, electrical panel upgrades, etc.)

Not applicable.

Please indicate the total number of the vehicles in the following vehicle classes that are in your current fleet

Definitions:

- Light duty vehicles (LDVs) are designated primarily for transport of passengers <13 and GVWR<3900kg
- Light duty trucks (LDTs) are designated primarily for transport of light-weight cargo or that are equipped with special features such as four-wheel drive for off-road operation (include SUVs, vans, trucks with a GVWR<3,900kg)
- Heavy duty vehicles (HDV) includes vehicles with a GVWR>3,900 kg (e.g. ³/₄ tonne pick-up truck, transport trucks)

Light duty vehicles (LDVs)

```
Electric Vehicles – EV - (e.g., Nissan Leaf, Chevy Bolt)
```

2

```
"Plug In" Electric Vehicle – PHEV -- (e.g., plug-in Prius, Chevy Volt)
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0

```
Hybrid vehicles - HEV - (e.g., non "Plug In"- older Toyota Prius, Toyota Camry hybrid)
```

0

Hydrogen fuel cell vehicles

0

Natural gas/propane	

0

Gas/diesel	
0	

Light duty trucks (LDTs)

Electric Vehicles – EV 0

```
"Plug In" Electric Vehicle – PHEV
```

Hybrid vehicles – HEV – (e.g., non "Plug In"- older Ford Escape Hybrid, older Chevrolet Silverado pickup hybrid, etc)

0

Hydrogen fuel cell vehicles

```
0

Natural Gas/propane

0

Gas/diesel

1
```

Heavy duty vehicles (HDV)

Electric Vehicles – EV

0

"Plug In" Electric Vehicle – PHEV

Hybrid vehicles – HEV – (e.g., non "Plug In")	
0	
Hydrogen fuel cell vehicles	
0	
Natural Gas/propane	
0	
Gas/diesel	
1	

Actions taken by your organization in 2019 to support emissions reductions from paper supplies.

Briefly describe your organization's plans to continue reducing emissions from paper use:

Over the medium-term (1-5 years)

Have a policy requiring the purchase of recycled content paper. Encourage all employees to send documentation electronically.

Over the long term (6-10 years)

Currently working on the long term goal.

Do you have an awareness campaign focused on reducing office paper use?

No

Purchased alternate source paper (bamboo, hemp, wheat, etc.)

Yes

Other 2019 actions, please specify

None.