2019
Carbon Neutral Action Report

SAANICH SCHOOLS

DECLARATION STATEMENT

This Carbon Neutral Action Report for the period January 1, 2019 to December 31, 2019 summarizes our emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2019 to reduce our greenhouse gas emissions and our plans to continue reducing emissions in 2020 and beyond.

Emissions and Offsets Table

School District No. 63 GHG Emissions and Offsets for 2019	
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.	
Total Emissions ($tC0_2E$)	1,892
Total $BioCO_2$	20.9
Total Offsets ($tC0_2E$)	1,487
Offset Investment	$37,175

Retirement of Offsets:

In accordance with the requirements of the *Climate Change Accountability Act* and Carbon Neutral Government Regulation, School District No.63 **(the Organization)** 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:

P Mckenzie — May 27/2020

Paul McKenzie, Assistant Superintendent — **Date**

INTRODUCTION

The Saanich School District Board of Education agreed to take action on climate change in 2010 by adopting a target to reduce Green House Gas (GHG) emissions by 33% by 2020. This target has since been updated by the Province of British Columbia to 40% below 2007 levels by 2030.

As part of the Saanich School District's effort to contribute to this commitment and prepare our students to participate in an environmentally sustainable society, we follow a five-step process to achieve carbon neutrality:

1. Measure GHG emissions from buildings, vehicles and paper use
2. Reduce emissions by conserving electricity and fossil fuels
3. Offset remaining emissions by purchasing an equivalent amount of high-quality, made-in-B.C. carbon offsets
4. Report annually on progress through the Carbon Neutral Action Report (CNAR)
5. Verify data and emissions

This report details the SD63's GHG emission reduction Goals, Strategies and Targets. In addition it outlines the energy conservation projects and initiatives that were implemented in 2019.

ABOUT SAANICH SCHOOLS

The Saanich School District has nearly 8,000 students in eight elementary schools, three middle schools, and three secondary schools. In addition, the District also provides programming at a Children's Development Centre and two Individual Learning Centres. We also have one of the province's most successful International Student programs.

In Saanich, everything we do is driven by a desire to see students achieve success and personal growth. Our district's success is measured not only by our students' academic accomplishments but by how well we inspire them to reach their full potential and be outstanding citizens locally and across the globe.

We place a high priority on the important relationships we have formed with our local communities including the W̱SÁNEĆ First Nation on whose traditional territory we live, work and learn. Together we build strong schools where our students thrive and develop.

Our commitment to students and staff includes the operation and maintenance of our buildings in a manner that incorporates health, safety, fiscal responsibility and a reduced environmental impact.

Territorial Acknowledgement

We acknowledge and thank the W̱SÁNEĆ people on whose traditional territory we live, learn, and teach. The W̱SÁNEĆ people have lived and worked on this land since time immemorial.

GHG REDUCTION GOALS & STRATEGIES

Goals are imperative for determining a clear direction for GHG emission reductions within SD63. Our targets are aligned with Provincial Government legislation. The strategies outlined in this plan show how Saanich District will achieve the stated goals and provides further direction on what actions will be required to implement the strategies.

Goals

Saanich School District has identified a number of goals to reduce GHG's. Targets align with those determined by the Provinces' commitment to reducing Green House Gases.

Area	Goal(s)	Targets
Buildings	Reduce emissions from SD63 operations by implementing cost-effective projects that reduce long term operational expenditures.	40% GHG reduction by 2030 60% GHG reduction by 2040 80% GHG reduction by 2050
Fleet	Manage resources consumed by fleet effectively, both in terms of cost and GHG emissions.	
Paper	Reduce paper use	
Waste	Divert recyclable material from landfill	

Strategies & Actions

The Saanich School District has identified the following strategies to reduce GHG Emissions.

Buildings

To reduce emissions from SD63 operations by implementing cost-effective projects that reduce long term operational expenditures the District will:

1. Identify cost-effective projects, specifically:
   - LED lighting
   - Ventilation control
   - High-efficiency boilers
   - Improved control of heating systems

2. Leverage a combination of AFG, CNCP, and utility funding for project implementation.
3. Conduct cost/benefit analysis of recommissioning larger schools a second time.
4. Utilize energy audits conducted on all buildings over the past five years to understand where the most cost-effective energy saving measures exist.
5. Repeat energy audits as technology and operating conditions change.
6. Retrofit buildings as independent cost-effective system upgrades.
7. Utilize periodic upgrades to schools for seismic or expansion to upgrade the efficiency of building systems (particularly replacing boilers with high-efficiency models or building envelope improvements).

Fleet

To effectively manage both cost and environmental resources consumed by fleet, SD63 will:

1. Continue implementation of the no-idling policy.
2. Track all District vehicles with a GPS tracking system.
3. Conduct bus fleet route optimization several times per year.
4. Monitor the cost of electrical vehicles and buses with the aim to replace gas vehicles with electric.
5. Ensure the Transportation department is aware of development in electric bus and CNG bus technology in anticipation of future requirements to convert and be ready with the appropriate infrastructure.

Paper

Although the School District has not yet determined a longer-term strategy for reducing paper emissions, we have committed to taking the following actions:

1. Promoting double-sided printing.
2. Encouraging electronic storage.
3. Purchasing paper with high-recycled content.

PROJECTS & INITIATIVES

A number of energy and emission reduction projects and initiatives were implemented by the Saanich School District in 2019. As in 2018, the primary energy conservation activity in 2019 was conversion of lighting from fluorescent to LED and lighting redesign.

Buildings

School District No. 63 (Saanich) schools are generally in good condition. Buildings and their components need to be maintained on a scheduled basis and building systems need to be renewed and / or replaced as they age to maintain high levels of energy efficiency.

The aging building systems are monitored on a regular basis and where relevant are evaluated to determine if the building component meets the Ministry of Education's criteria for capital funding renewal and/or replacement. The following building projects were completed this year.

Lighting

The District has performed lighting redesign projects in 11 of our schools to reduce excessive lighting levels and unnecessary operating hours. At the same time, LED replacements of fluorescent lights resulted in an estimated reduction of 0.381837 tonnes C02e or a total emissions reduction of 8.58%. In addition to energy conservation, LED lights have improved light quality and comfort levels for staff and students.

Energy Audits

Energy audits are conducted to understand what measures can be taken that will improve energy efficiency within a building. 15% of the District's buildings were audited this year.

Ventilation Control

The District has performed adjustments on ventilation fans to coincide with occupancy to cease fan operation when there are no occupants in the buildings.

Plug Load Control

The District has conducted information sessions on plug loads with limited success. There is a hesitation for staff to stop using space heaters, kettles and such.

Building Retrofits

Each year the District completes a combination of minor, major and deep retrofits. These retrofits upgrade building components or system to increase operating efficiency. The below table shows the percentage of our building portfolio that was retrofitted by category.

Category	Percentage (%)
Minor retrofits (e.g. low cost, easy to implement measures including caulking, lighting, adding roof insulation, etc.)	20%
Major retrofits (e.g. replacing windows and doors, equipment replacement such as boilers, etc.)	5%
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.)	3%

Fleet

SD63 owns and operates a fleet of 57 vehicles. The majority are Light Duty Trucks and Vans (32), followed by Buses (24) and 1 Light Duty Vehicle. None of these vehicles are electric as currently the capital costs for purchasing these kinds of vehicles are cost prohibitive. The District will continue to monitor electric vehicle costs and incentive programs that may allow for future electric fleet additions or conversions.

In 2019 fleet reduced their emissions through continued implementation of a no-idling policy and bus fleet route optimization that is performed several times per year.

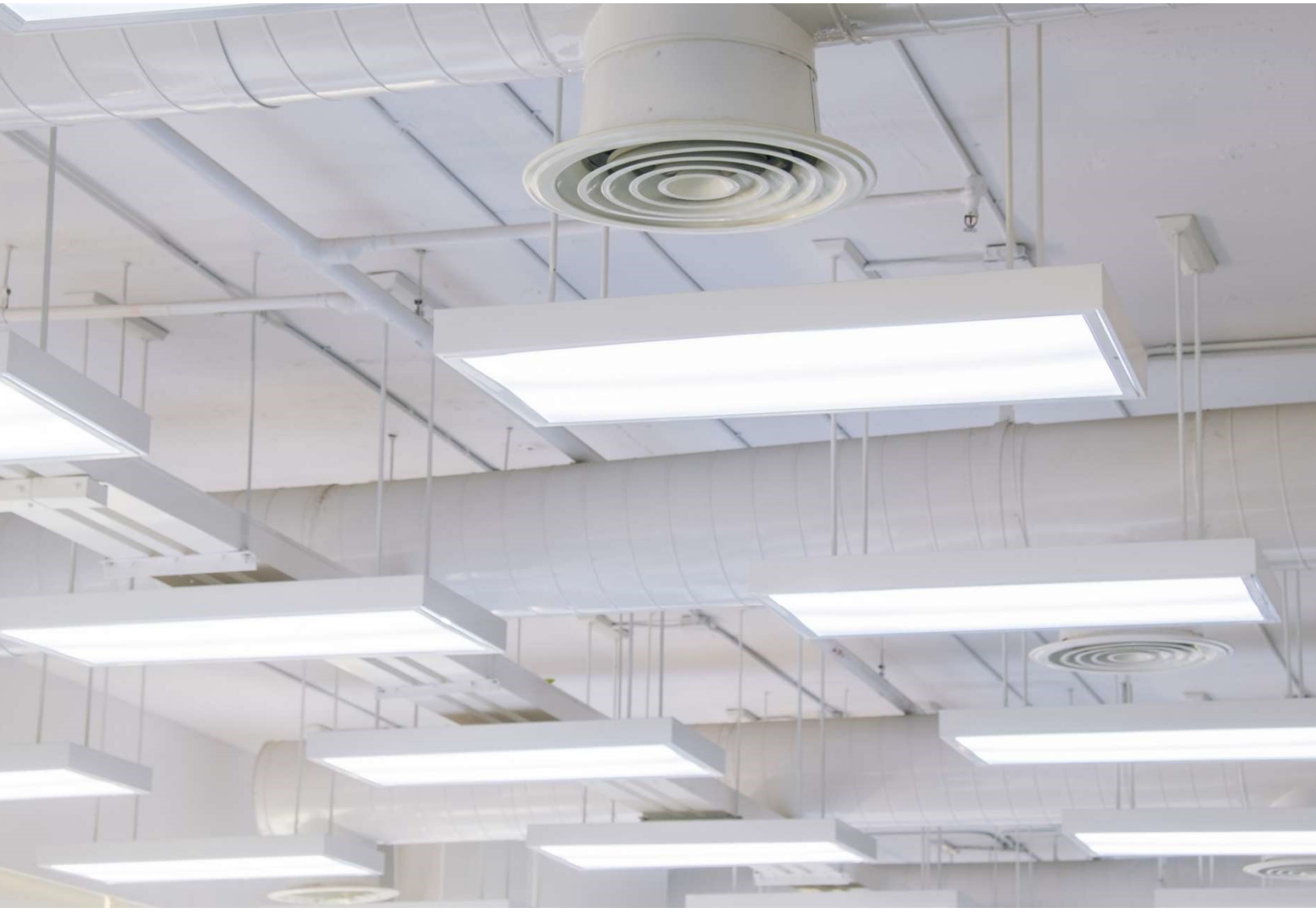
Waste Reduction

The district manages and operates a wide-reaching recycling program aimed at reducing waste within our schools. All Schools operate independent recycling programs and students are encouraged to use multi use containers.

SUMMARY

SD 63 made significant efforts to reduce energy consumption in 2019 through lighting redesign and replacement of fluorescent lights with LED. Various building retrofits and fleet resource optimization also contributed to the emission reductions this year.

The District will continue to identify and implement energy reduction initiatives that will decrease operational GHG emissions and contribute to the Provincially legislated GHG reduction goals.



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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 *Climate Change Accountability Act* and the Carbon Neutral Government Regulation.

Due to the COVID-19 pandemic, the following Directive 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) website 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 Carbon.Neutral@gov.bc.ca 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: Carbon.Neutral@gov.bc.ca
June 30, 2020*	• Ministry of Environment and Climate Change Strategy must post a final CNAR for each organization on the BC Government's CNG website and each PSO is encouraged to post the report on their website. • The **CNAR Survey** (optional for Small Emitters) must be completed and submitted online. *Deadline extended from May 29, 2020. • All offset invoice payments must be submitted to CAS.
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: Carbon.Neutral@gov.bc.ca. *Deadline extended from May 15, 2020.

*See the Carbon Neutral Government – Program Requirements website 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:

Rob Lumb

Contact Email:

rlumb@saanichschools.ca

Organization Name:

School District 63 Saanich

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:

School District (SD)

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)

Reduce GHG emissions from SD63 operations by implementing cost-effective projects that reduce long term operational expenditures. SD63 will continue to identify cost-effective projects, primarily related to LED lighting, ventilation control, high-efficiency boilers and improved control of heating systems and utilize a combination of AFG, CNCP, and utility funding for implementation.

Over the long term (6-10 years)

SD63 has identified that the current project path is unlikely to meet the new targets under CleanBC of a 50% reduction in building emissions and a 40% reduction in fleet emissions by 2030. Potential projects to meet these targets will be identified in 2020 and an estimated capital cost assembled. The expected amount of capital is not currently available with existing funding sources.

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

SD63 performs periodic energy audits of buildings and has currently had all buildings audited over the past five years. However, scope exists to repeat audits as technology and operating conditions change.

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

15%

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

Building retrofits are done independently as cost-effective system upgrades, through periodic upgrades to schools for seismic or expansion reasons and these opportunities are used to upgrade the efficiency of building systems (particularly replacing boilers with high-efficiency models or building envelope improvements).

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

See below.

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

20%

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

5%

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.)

3%

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

SD63 has performed recommissioning in the past and is currently considering the cost/benefit of revisiting the larger schools.

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

0%

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.

Yes

If yes, have you quantified and reported the associated emissions? What, if any, mitigation approaches have been considered? Please describe

No we have not quantified or reported associated emissions. All refrigerant work is subcontracted to licensed suppliers who comply with capture and reporting requirements.

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

All refrigerant work is subcontracted to licensed suppliers who comply with capture and reporting requirements.

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

0, no new buildings built

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

0, no new buildings built

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

No new buildings completed.

Other actions? Please describe briefly:

The District has performed lighting redesign in conjunction with LED retrofits to reduce unnecessary lighting and excessive lighting levels or operating hours.

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)

The goal is to manage resources consumed by fleet effectively, both in terms of cost and GHG emissions. SD63 has a no-idling policy, tracks all District vehicles with a GPS tracking system and performs bus fleet route optimization several times per year.

Over the long term (6-10 years)

SD63 will continue to monitor the cost of electrical vehicles and buses with the aim to replace gas vehicles with electric. Currently this is not possible as current capital costs for these categories of vehicles are typically twice as much as gas/diesel versions.

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

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

0

"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?

No vehicles purchased this year.

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?

0

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

0

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

0

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

Level 2?

0

Level 3?

0

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

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.)

Transportation department is aware of development in electric bus and CNG bus in anticipation of future requirements to convert.

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. ¾ tonne pick-up truck, transport trucks)

Light duty vehicles (LDVs)

Electric Vehicles – EV - (e.g., Nissan Leaf, Chevy Bolt)
0

“Plug In” Electric Vehicle – PHEV -- (e.g., plug-in Prius, Chevy Volt)
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
1

Light duty trucks (LDTs)

Electric Vehicles – EV
0

“Plug In” Electric Vehicle – PHEV
0

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
29

Heavy duty vehicles (HDV)

Electric Vehicles – EV
0

“Plug In” Electric Vehicle – PHEV
0

Hybrid vehicles – HEV – (e.g., non “Plug In”)
0

Hydrogen fuel cell vehicles
0

Natural Gas/propane
0

Gas/diesel
24

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)
Promote double-sided printing, electronic storage and high-recycled content purchasing.

Over the long term (6-10 years)
We don't have any long term plans.

Do you have an awareness campaign focused on reducing office paper use?
No

Purchased alternate source paper (bamboo, hemp, wheat, etc.)
No

Other 2019 actions, please specify
None.