

# Public Sector Climate Leadership 2023 Year in Review

## Introduction

Under the legislated, award-winning Carbon Neutral Government program, B.C.'s public sector must maintain a net impact of zero greenhouse gas (GHG) emissions. Public sector organizations (PSOs) under this program include health authorities, school districts, universities, colleges, institutes, Crown corporations, and Provincial Government offices. 2023 marked the 14th consecutive year of public sector carbon neutrality in B.C.

This Year in Review summary report highlights actions taken by PSOs in 2023 to reduce emissions and the B.C. public sector's progress towards CleanBC targets for public sector buildings and fleet vehicles. While some progress toward these targets has been made, more action is needed to meet the long-term goals.

For the 2023 reporting year, B.C.'s 130 PSOs, including Provincial Government, reported 732,834 tonnes of emissions of carbon dioxide equivalents (tCO<sub>2</sub>e) from their operations. This report summarizes the emissions reported by PSOs over the 2023 calendar year with a breakdown by sector and source and discusses the impact of weather on emissions.

Further details, including a breakdown of emissions by PSO and the offsets portfolio for Carbon Neutral Government 2023, are included in the Appendices.

## Contents

Background.....	3
2023 progress to targets.....	4
2023 highlights.....	5
Public sector emissions breakdown and trends .....	6
The impact of 2023's weather on energy use .....	7
Appendix A - Summary of emissions and offsets.....	8

## Background

The B.C. public sector plays an important role as a climate action leader by adopting forward-thinking policies, setting ambitious targets, and exploring innovative approaches to climate action. The [2018 CleanBC Plan](#) commits government to two key emission targets for the public sector to reach by 2030, compared to the 2010 baseline:

- Reduce building emissions by 50%
- Reduce fleet emissions by 40%

B.C.'s Carbon Neutral Government (CNG) program, the first of its kind in North America, requires the public sector to monitor, report and track progress on emission reductions. Under the CNG program, each PSO:

- Measures GHG emissions from their operations
- Plans and takes action to reduce those emissions
- Purchases offsets to achieve net zero emissions
- Reports publicly through an individual PSO-specific Climate Change Accountability Report

The total emissions reported in this summary meet the reporting requirements set out in the Carbon Neutral Government Regulation under the Climate Change Accountability Act.

## 2023 progress to targets

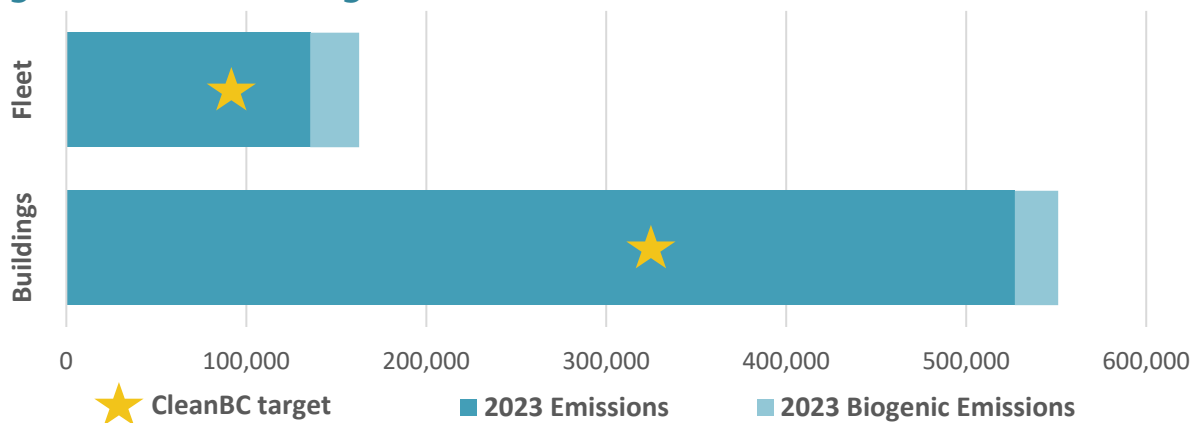
While the B.C. public sector has made some progress in reducing emissions, more action is needed to meet CleanBC targets.

As of 2023, carbon dioxide (CO<sub>2</sub>) emissions from biogenic sources<sup>1</sup> are tracked but no longer included in B.C.'s total GHG emissions when measuring progress towards targets.

In 2023, total building emissions, including biofuels, were 15 percent lower than 2010 levels, while fleet emissions were five percent higher. When excluding biofuels, public sector building emissions saw a 19 percent reduction, and fleet emissions a 10 percent reduction compared to 2010.

Although paper and business travel do not have specific CleanBC targets, emissions from paper have dropped by 30 percent and business travel emissions<sup>2</sup> by 55 percent compared to 2010 levels. The reduction in paper emissions is largely attributed to decreased paper consumption; further emission reductions can be achieved by selecting paper types that have a lower carbon footprint, such as recycled paper or alternative paper.<sup>3</sup> Similarly, the decrease in travel emissions is largely driven by reduced business travel, and further reductions could be realized by choosing lower carbon transportation options such as public transit.

**Figure 1. 2023 building and fleet emissions**



<sup>1</sup> Biogenic fuels are derived from biologically based materials other than fossil fuels, peat, and minerals (US EPA, 2011). Examples include wood waste and renewable natural gas for heating and biodiesel for vehicles.

<sup>2</sup> Only Provincial Government is required to report business travel emissions; therefore, the reported reduction reflects business travel emissions from Provincial Government only.

<sup>3</sup> Alternative paper refers to paper made from agricultural residues including sugarcane bagasse, wheat straw, etc. It excludes paper made solely from wood fibre.

## 2023 highlights

### Public sector buildings:

- PSOs reported 67 new public sector buildings, building additions or deep retrofits completed in 2023 that achieved a certification or standard related to energy and carbon performance: 59 projects met the BC Housing Design standard, three projects attained Leadership in Energy and Environmental Design (LEED) Gold certification, and five projects achieved Passive House certification
- The Carbon Neutral Capital Program funded \$47 million in energy saving and emission reduction activities and technologies at PSO buildings, such as improved heating, ventilation and air-conditioning systems, solar panels, and electric vehicle charging stations

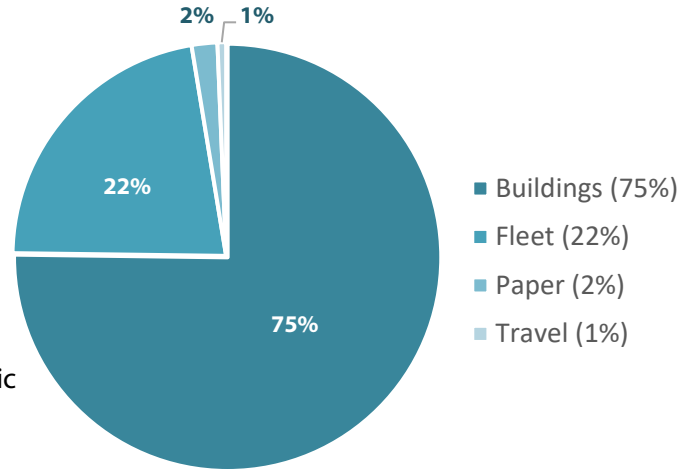
### Public sector fleet:

- Zero-emission vehicles (ZEVs) accounted for 17 percent of provincial government light-duty vehicle acquisitions in 2023, with an additional 102 vehicles (or 34 percent of light-duty vehicle acquisitions) being conventional hybrids
- School districts ordered an additional 21 electric school buses in the 2023/24 fiscal year, increasing the province-wide total to 92

## Public sector emissions breakdown and trends

Figure 2. 2023 emissions by source

Since the CNG program began, buildings have consistently contributed over 75 percent of public sector emissions. In 2023, fleets accounted for 22 percent of public sector emissions. The 2023 breakdown of emissions by source is shown in Figure 2 to the right.



Figures 3 and 4 below illustrate the year over year building and fleet emission trends from energy consumption in public sector buildings and fleets.

Figure 3. Public sector building emissions (tCO<sub>2</sub>e)

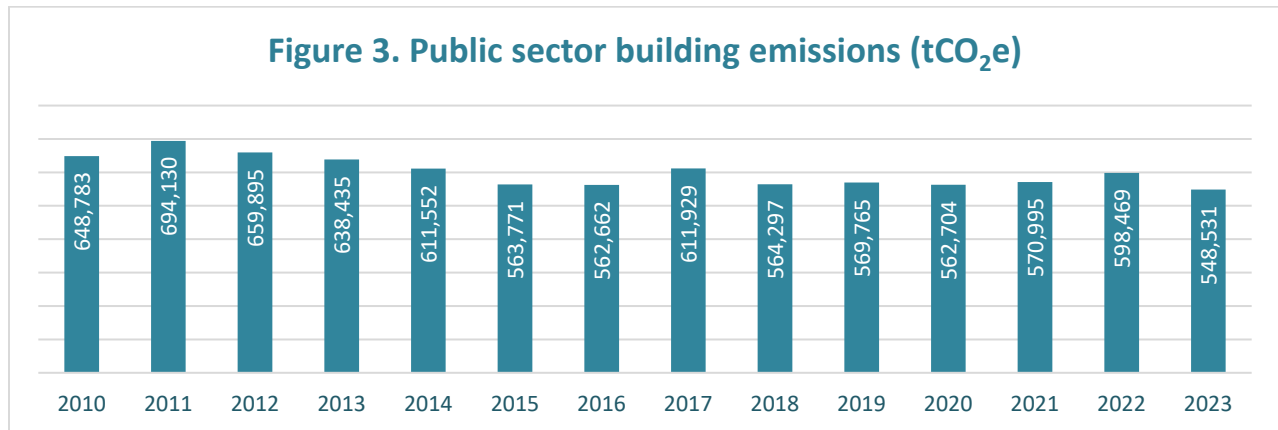
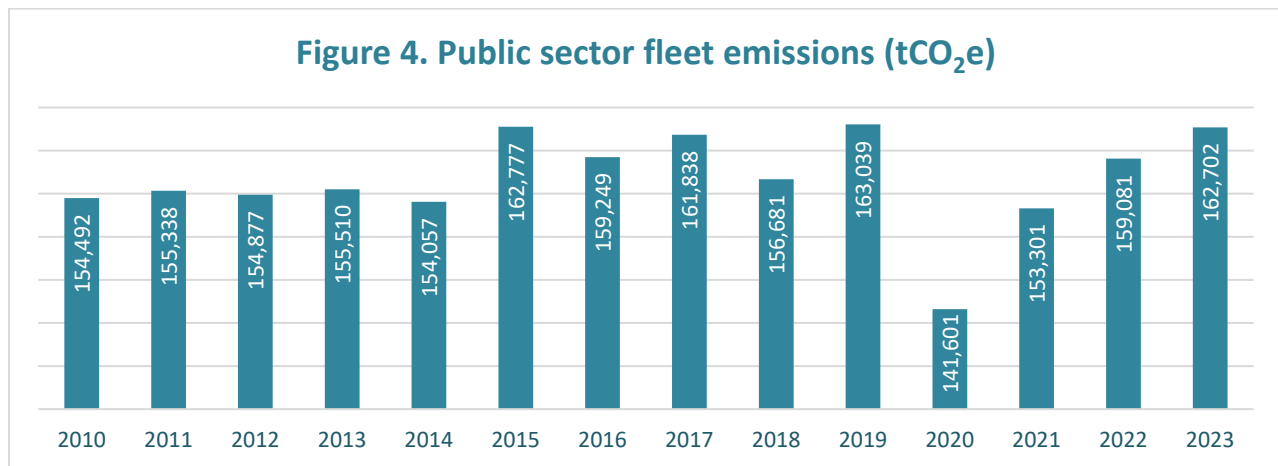


Figure 4. Public sector fleet emissions (tCO<sub>2</sub>e)



## The impact of 2023's weather on energy use

Year-to-year variations in weather affect the heating and cooling requirements in buildings. 2023 was a notably warm year, resulting in the third fewest heating degree-days (HDDs)<sup>4</sup> and the second most cooling degree-days (CDDs) in the program's history. Since most heating systems currently rely on fossil fuels and cooling primarily uses electricity, the warmer conditions in 2023 resulted in lower emissions than would be expected in a typical year.

---

<sup>4</sup> Energy requirements for heating and cooling buildings are measured in HDDs and CDDs, the difference between the average daily outdoor temperature and 15°C, the outdoor temperature at which the building would neither need heating or cooling. A day with an average outdoor temperature of 10°C contributes five HDDs while a 20°C average day contributes five CDDs.

## Appendix A - Summary of emissions and offsets

**Table 1. 2023 Public sector emissions by GHG and by source**

	Bio CO <sub>2</sub> Emissions (tCO <sub>2</sub> )	Non-bio CO <sub>2</sub> e Emissions (tCO <sub>2</sub> e)	Total Emissions (tCO <sub>2</sub> e)
<b>Scope 1</b>			
Buildings (Direct Fuel Combustion)	24,087	476,446	500,533
Fleet (Mobile Energy Use)	27,213	135,488	162,701
Fugitive Emissions		2,579	2,579
<b>Scope 2</b>			
Buildings (Purchased Energy)		47,997	47,997
<b>Scope 3</b>			
Paper		14,251	14,251
Travel	36	4,738	4,774
<b>TOTAL</b>	<b>51,336</b>	<b>681,499</b>	<b>732,835</b>

Table 1 Notes:

- (1) Table 1 reports Scope 1, 2, and 3 emissions in accordance with international protocols.
  - a. Scope 1 emissions refer to direct emissions generated by an organization from sources it owns or controls. These include emissions resulting from the combustion of fossil fuels (e.g., natural gas for heating, gasoline for vehicle fuels), biogenic fuels (e.g., wood waste for heating, renewable fuels for fleet and stationary) and fugitive emissions (e.g., hydrofluorocarbons from air conditioning equipment).
  - b. Scope 2 emissions represent those produced by third parties in the production of energy purchased by B.C.'s PSOs (e.g., electricity).
  - c. Scope 3 emissions represent those produced by third parties in the production of goods and services purchased by B.C.'s PSOs (e.g., office paper, business travel<sup>5</sup>).
- (2) International protocols require biogenic CO<sub>2</sub> (bio CO<sub>2</sub>) emissions from combustion be reported separately from fossil combustion and biogenic non-CO<sub>2</sub> emissions.
- (3) For more information on how the B.C. public sector measured its emissions in 2023, please refer to the [2023 B.C. Best Practices Methodology for Quantifying Greenhouse Gas Emissions](#).
- (4) Non-bio CO<sub>2</sub>e emissions in Table 1 include 60,294 tCO<sub>2</sub>e emissions from public transit and school buses, which are offset exempt.
- (5) Due to rounding, numbers presented above may not add up precisely to the totals reported.

<sup>5</sup> Only Provincial Government is required to measure, report and offset emissions from business travel.

**Table 2. 2023 emissions by public sector organization**

Public Sector Organization	Emissions (tCO <sub>2</sub> e)	Offsetable Emissions (tCO <sub>2</sub> e)	Bio CO <sub>2</sub> Emissions (tCO <sub>2</sub> )	Public Sector Organization	Emissions (tCO <sub>2</sub> e)	Offsetable Emissions (tCO <sub>2</sub> e)	Bio CO <sub>2</sub> Emissions (tCO <sub>2</sub> )
<b>BC PUBLIC SECTOR TOTAL</b>	<b>732,834</b>	<b>621,205</b>	<b>51,335</b>	<b>School Districts (Cont'd)</b>			
<b>Provincial Government Total</b>	<b>55,935</b>	<b>54,499</b>	<b>1,435</b>	School District 50 - Haida Gwaii	883	814	8
<b>Crown Corporations Total</b>	<b>156,878</b>	<b>91,033</b>	<b>24,778</b>	School District 51 - Boundary	1,201	1,131	7
BC Family Maintenance Agency	22	22	0	School District 52 - Prince Rupert	750	748	2
BC Financial Services Authority	101	101	0	School District 53 - Okanagan Similkameen	1,100	781	15
BC Infrastructure Benefits	32	32	0	School District 54 - Bulkley Valley	1,031	1,014	17
BC Assessment Authority	242	239	3	School District 57 - Prince George	4,534	4,513	21
BC Council for International Education	5	5	0	School District 58 - Nicola-Similkameen	1,273	998	12
BC Games Society	2	2	0	School District 59 - Peace River South	2,667	1,779	32
BC Housing Management Commission	33,454	33,438	16	School District 60 - Peace River North	3,976	2,829	52
BC Hydro	31,745	30,971	774	School District 61 - Greater Victoria	5,334	5,323	11
BC Liquor Distribution Branch	3,982	3,961	21	School District 62 - Sooke	2,146	1,680	33
BC Lottery Corporation	945	640	305	School District 63 - Saanich	2,033	1,587	21
BC Pavilion Corporation	4,522	4,476	47	School District 64 - Gulf Islands	260	152	6
BC Transit	66,234	1,574	23,596	School District 67 - Okanagan Skaha	1,300	1,123	10
British Columbia Securities Commission	118	118	0	School District 68 - Nanaimo-Ladysmith	3,872	3,468	38
Columbia Basin Trust	351	350	0	School District 69 - Qualicum	1,830	1,291	23
Columbia Power Corporation	13	13	0	School District 70 - Alberni	874	736	11
Community Living British Columbia	143	141	1	School District 71 - Comox Valley	1,750	1,743	7
Destination BC	55	55	0	School District 72 - Campbell River	2,182	1,759	24
First People's Cultural Council	1	1	0	School District 73 - Kamloops-Thompson	6,865	5,206	82
Forest Enhancement Society of BC	6	6	0	School District 74 - Gold Trail	881	501	16
Forestry Innovation Investment	47	47	0	School District 75 - Mission	1,724	1,392	16
SkilledTradesBC	5	5	0	School District 78 - Fraser-Cascade	781	585	11
Innovate BC	18	18	0	School District 79 - Cowichan Valley	2,231	1,551	106
Insurance Corporation of BC	14,174	14,165	9	School District 81 - Fort Nelson	874	865	1
Knowledge Network Corporation	101	101	0	School District 82 - Coast Mountain	1,876	1,859	8
Legal Services Society	88	88	0	School District 83 - North Okanagan-Shuswap	3,245	2,187	41
BC Energy Regulator	356	349	6	School District 84 - Vancouver Island West	139	91	6
Infrastructure BC Inc.	16	16	0	School District 85 - Vancouver Island North	889	530	201
InBC Investment Corp	1	1	0	School District 87 - Stikine	430	428	2
Real Estate Foundation	1	1	0	School District 91 - Nechako Lakes	2,762	1,817	40
Royal BC Museum	78	78	0	School District 92 - Nisga'a	200	121	36
Transportation Investment Corporation	20	19	0	School District 93 - Conseil Francophone	1,251	1,250	0
<b>Health Authorities Total</b>	<b>222,872</b>	<b>221,053</b>	<b>1,817</b>	<b>Universities &amp; Colleges Total</b>	<b>127,352</b>	<b>105,669</b>	<b>21,659</b>
BC Emergency Health Services	17,333	16,834	499	British Columbia Institute of Technology	6,405	6,400	5
Fraser Health Authority	40,452	40,413	39	Camosun College	2,227	2,226	1
Interior Health Authority	41,436	40,524	911	Capilano University	1,253	1,253	1
Louis Brier Home & Hospital	958	958	0	Coast Mountain College	988	985	2
Menno Hospital	438	437	0	College of New Caledonia	1,598	1,597	2
Mount St. Mary Hospital	403	403	0	College of the Rockies	999	984	1
Nisga'a Valley Health Authority	245	241	4	Douglas College	1,533	1,533	0
Northern Health Authority	21,033	20,985	48	Emily Carr University of Art and Design	92	92	0
Providence Health Care	9,262	9,100	162	Justice Institute of BC	702	697	4
Provincial Health Services Authority	18,778	18,754	24	Kwantlen Polytechnic University	2,459	2,458	1
St. Michael's Centre	321	321	0	Langara College	1,199	1,199	0
Vancouver Coastal Health Authority	43,513	43,464	49	Nicola Valley Institute of Technology	283	281	2
Vancouver Island Health Authority	28,700	28,619	81	Northern Lights College	1,956	1,953	3
<b>School Districts Total</b>	<b>169,797</b>	<b>148,951</b>	<b>1,646</b>	North Island College	1,016	1,016	1
School District 05 - Southeast Kootenay	3,101	2,637	20	Okanagan College	1,124	1,123	1
School District 06 - Rocky Mountain	1,829	1,323	23	Royal Roads University	961	720	240
School District 08 - Kootenay Lake	3,062	2,306	38	Selkirk College	1,118	1,064	54
School District 10 - Arrow Lakes	244	147	4	Simon Fraser University	10,382	10,297	85
School District 19 - Revelstoke	340	279	3	Thompson Rivers University	5,459	3,113	2,345
School District 20 - Kootenay-Columbia	1,627	1,398	11	University of British Columbia	61,090	48,669	12,421
School District 22 - Vernon	2,321	1,980	18	University of Northern British Columbia	8,105	1,639	6,466
School District 23 - Central Okanagan	6,180	4,713	46	University of The Fraser Valley	2,099	2,098	1
School District 27 - Cariboo-Chilcotin	3,263	1,993	57	University of Victoria	10,315	10,302	13
School District 28 - Quesnel School	1,526	913	27	Vancouver Community College	1,180	1,180	0
School District 33 - Chilliwack	3,997	3,025	44	Vancouver Island University	2,809	2,790	10
School District 34 - Abbotsford	4,142	3,238	67				
School District 35 - Langley	5,441	4,967	23				
School District 36 - Surrey	17,528	17,306	35				
School District 37 - Delta	2,650	2,642	9				
School District 38 - Richmond	5,885	5,709	15				
School District 39 - Vancouver	16,011	15,818	193				
School District 40 - New Westminster	1,047	1,045	2				
School District 41 - Burnaby	5,845	5,839	6				
School District 42 - Maple Ridge	3,791	3,783	8				
School District 43 - Coquitlam	7,424	7,359	21				
School District 44 - North Vancouver	3,822	3,757	5				
School District 45 - West Vancouver	1,583	1,580	4				
School District 46 - Sunshine Coast	804	800	4				
School District 47 - Powell River	1,015	758	14				
School District 48 - Sea to Sky	1,854	1,524	22				
School District 49 - Central Coast	321	260	11				

**Notes:**

- Due to rounding, numbers presented in Table 2 for each organization may not add up precisely to the totals reported
- B.C.'s Crown Corporations, schools, universities, colleges and health facilities purchase offsets from the Ministry of Environment and Climate Change Strategy at \$25 per tonne of CO<sub>2</sub>e to become carbon neutral
- Emissions from public transit and school buses are offset exempt
- Bio CO<sub>2</sub> emissions are produced from the combustion of biogenic fuels (and are offset exempt)
- A total of 623,231 offsets were included in the Portfolio of Offset Projects for the 2023 Carbon Neutral Government Commitment (see Table 3). In addition to the 621,205 offsets required to address 2023 emissions, an additional 2,026 offsets were retired to reflect adjustments to prior year reported emissions years.

**Table 3. Portfolio of offset projects for the 2023 Carbon Neutral Government commitment**

Project	Sector	Project Type	Price / Tonne	Offset Units	Value
<b>Low Emissions Facility</b> ARC Resources, Dawson Creek	Oil and Gas	Fuel Switching	\$8.00	50	\$400
<b>Electrification of Gas Production Plant (Noel)</b> Blue Source, Dawson Creek	Oil and Gas	Fuel Switching	\$8.00	50	\$400
<b>Electrification of Gas Processing Plant (Septimus)</b> Blue Source, Taylor	Oil and Gas	Fuel Switching	\$8.00	50	\$400
<b>Engine Fuel Gas Management (REMVue)</b> Blue Source, Northeastern BC	Oil and Gas	Energy Efficiency	\$11.00	50	\$550
<b>Natural Gas to Biomass Fuel Switch</b> Canfor B.C. Sawmills – Chetwynd, Elko, Prince George	Forest – Industry	Fuel Switching	\$9.75	150	\$1,462.50
<b>Cheakamus Community Forest</b> Cheakamus Community Forest Society, Whistler	Forestry – Land Use	Forest Carbon	\$14.00	3,856	\$53,984
<b>Forest Conservation/Improved Forest Management</b> Great Bear Rainforest, Haida Gwaii	Forestry – Land Use	Forest Carbon	\$12.00	193,944	\$2,327,328
<b>Forest Conservation/Improved Forest Management</b> Great Bear Rainforest, North and Central Mid-Coast	Forestry – Land Use	Forest Carbon	\$12.00	307,404	\$3,688,848
<b>Forest Conservation/Improved Forest Management</b> Great Bear Rainforest, South Central Coast	Forestry – Land Use	Forest Carbon	\$12.00	108,008	\$1,296,096
<b>Clean Tech Biomass Gasification</b> Kruger Products, New Westminster	Forest – Industry	Fuel Switching	\$15.00	2,467	\$37,005
<b>Landfill Gas Collection</b> Columbia Shuswap Regional District, Salmon Arm	Waste – Landfill	Landfill Gas Management	\$13.00	6,502	\$84,526
<b>Switching to Biomass/Installing Energy Curtains</b> Sun Select Delta, Delta	Agriculture	Fuel Switching	\$11.00	50	\$550
<b>Bus Fuel Efficiency Project</b> Translink, Metro Vancouver	Transportation	Energy Efficiency	\$13.00	650	\$8,450
<b>GRAND TOTAL</b>				<b>623,231<sup>6</sup></b>	<b>\$7,499,999.50</b>

<sup>6</sup> In addition to the 621,205 offsets required to address 2023 emissions, an additional 2,026 offsets were retired to reflect adjustments to prior year reported emissions years.