

Capital Region District – Municipalities and Electoral Areas  
**2007 Base Year and 2022 Reporting Year Energy & GHG  
Emissions Inventory**

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Project #: 16092514

Date: September 14, 2023

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# SUMMARY

Climate change has emerged as the next unprecedented social, economic, and environmental challenge facing society today. It poses a serious threat to quality of life, jobs, and physical and natural assets. Scientists believe that the human-production of greenhouse gas (GHG) emissions since pre-industrial times have already surpassed the Earth’s “carrying capacity” of natural systems and pose significant future risks to human well-being.

Recognizing the role that Capital Regional District (CRD) plays in achieving a significant and immediate reduction in global GHG emissions, the CRD set a regional GHG reduction target of 61% (from 2007 levels) by 2038. In February 2019, the CRD declared a climate emergency and committed to regional carbon neutrality. Local governments across the region have also set similar ambitious GHG reduction targets and commitments.

To meet these climate commitments, the CRD seeks a better understanding of the energy and GHG emissions at the regional level, as well as at the local government level which includes 13 municipalities and 3 electoral areas. The following document presents a summary of energy and GHG emissions at both the CRD and local government level for the 2007 and 2022 reporting years. This document compliments a 2022 inventory report which describes the methodologies and data sources applied to derive the estimate of GHG emissions for the CRD and local governments. A summary of the 2007 and 2022 GHG emissions and energy by local government is presented in **Table 1** and **Table 2**, respectively.

**Table 1. Summary of GHG Emissions By CRD Local Government**

Local Government	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
District of Central Saanich	100,771	111,246	10.4%
City of Colwood	84,132	84,570	0.5%
Township of Esquimalt	96,206	74,246	-22.8%
District of Highlands	11,901	15,019	26.2%
Juan de Fuca Electoral Area	63,610	32,598	-48.8%
City of Langford	137,319	202,749	47.6%
District of Metchosin	28,165	26,425	-6.2%
District of North Saanich	65,819	63,971	-2.8%
District of Oak Bay	90,308	74,984	-17.0%
District of Saanich	593,359	507,791	-14.4%
Salt Spring Island Electoral Area	50,023	50,992	1.9%
Town of Sidney	64,104	55,426	-13.5%
District of Sooke	52,539	64,405	22.6%
City of Victoria	483,269	407,082	-15.8%
Town of View Royal	51,087	51,486	0.8%
Southern Gulf Islands Electoral Area	32,015	35,335	10.4%

**Table 2. Summary of Energy Use By CRD Local Government**

<b>Local Government</b>	<b>2007 Energy (GJ)</b>	<b>2022 Energy (GJ)</b>	<b>Change (%)</b>
District of Central Saanich	1,899,678	2,167,736	14.1%
City of Colwood	1,564,731	1,682,007	7.5%
Township of Esquimalt	1,790,634	1,597,949	-10.8%
District of Highlands	224,145	300,539	34.1%
Juan de Fuca Electoral Area	1,293,256	937,656	-27.5%
City of Langford	2,642,187	4,139,276	56.7%
District of Metchosin	525,440	535,995	2.0%
District of North Saanich	1,345,969	1,436,531	6.7%
District of Oak Bay	1,671,340	1,520,022	-9.1%
District of Saanich	11,256,692	10,288,081	-8.6%
Salt Spring Island Electoral Area	1,079,295	1,181,612	9.5%
Town of Sidney	1,258,133	1,195,902	-4.9%
District of Sooke	983,346	1,302,000	32.4%
City of Victoria	9,876,133	9,193,993	-6.9%
Town of View Royal	982,469	1,069,552	8.9%
Southern Gulf Islands Electoral Area	766,699	848,020	10.6%

# 1 INTRODUCTION

## 1.1 GHG Emissions & Climate Change

There is overwhelming evidence that global climate change resulting from emissions of carbon dioxide and other greenhouse gases (GHGs) is having a significant impact on the ecology of the planet. In addition, climate change is expected to have serious negative impacts on global economic growth and development. In 2005, the UK government commissioned an independent economic review called the Stern Review, which states that the “costs of stabilizing the climate are significant but manageable; delay would be dangerous and much more costly”.

Beyond the costs associated with delayed action, there are cost savings to be realized through efforts to conserve energy and to use it more efficiently, and economic opportunities available to communities that develop local energy supply and infrastructure. Actions to encourage energy efficiency and conservation and to promote implementation of renewable energy will assist local governments in developing energy resilient communities, in addition to mitigating climate change. Local governments are at the forefront of global action on climate change, setting both ambitious commitments and targets while going about the difficult task of reducing emissions. Per the latest report from the C40 Cities Climate Leadership Group, ICLEI Local Governments for Sustainability, UN Habitat, and others, most GHG reduction commitments are set for 2030 or 2050 and range from a 10% to 100% reduction (**Figure 1**).

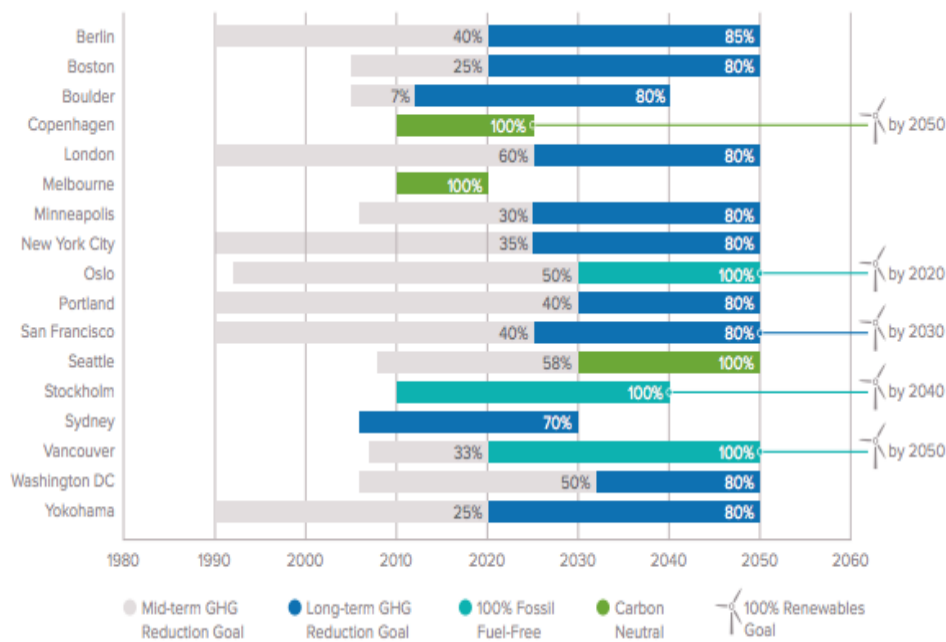


Figure 1. Summary of Long-Term Global GHG Emission Reduction Targets<sup>1</sup>

<sup>1</sup> <http://www.c40.org/>

## 1.2 GPC Protocol

To make informed decisions on reducing energy use and GHG emissions at the regional and local government scale, community managers must have a good understanding of these sources, the activities that drive them, and their relative contribution to the total. This requires the completion of an energy and GHG emissions inventory. To allow for credible and meaningful reporting locally and internationally, the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (the GPC Protocol) was developed as a partnership between ICLEI-Local Governments for Sustainability, The World Resources Institute (WRI) and C40 Cities Climate Leadership Group (C40), with additional collaboration by the World Bank, United Nations Environment Program (UNEP) and UN-Habitat. The GPC Protocol has now become recognized as the standardized way for local governments to collect and report their actions on climate change. Over 9,000 cities have committed to using the GPC Protocol.

The Protocol has two established levels of reporting: BASIC and BASIC+ which are defined as the following:

- The BASIC level covers scope 1 and scope 2 emissions from stationary energy and in-boundary transportation, as well as scope 1 and scope 3 emissions from waste.
- The BASIC+ level covers the same scopes as BASIC and includes more in-depth and data dependent methodologies. Specifically, it expands the reporting scope to include emissions from industrial process and product use (IPPU), agriculture, forestry and other land-use (AFOLU), and transboundary transportation.

## 1.3 Variance from Community Energy and Emissions Inventories (CEEI)

The CRD has historically relied on annual Provincial Community Energy and Emissions Inventories (CEEI) to track community GHG emissions. However, there have been some limitations to the CEEI in that it is an in-boundary inventory and the most recent version containing transportation data was published in 2010. Because the most recent (2019) CEEI's do not contain on-road transportation data, the CEEI Protocol does not fully meet the requirements of the GPC Protocol BASIC or BASIC+ reporting requirements which is the required reporting standard for local governments that have committed to the Global Covenant of Mayors (GCoM)—an agreement led by city networks to undertake a transparent and supportive approach to measure GHG emissions community-wide. The minimum GCoM reporting requirement requires quantifying and reporting on building stationary energy, on-road transportation, and waste GHG emissions. A high-level summary of the differences between the CEEI and GPC Protocol inventories are presented in **Table 3**.

**Table 3. Summary of GHG Inventory Scope Differences**

Reporting Sector	2007-2019 CEEI's	GPC BASIC	GPC BASIC+
Residential Buildings	✓	✓	✓
Commercial And Institutional Buildings And Facilities	✓	✓	✓
Manufacturing Industries And Construction	✓	✓	✓
Energy Industries		✓	✓
Energy Generation Supplied To The Grid		✓	✓



Reporting Sector	2007-2019 CEEI's	GPC BASIC	GPC BASIC+
Agriculture, Forestry And Fishing Activities		✓	✓
Non-Specified Sources		✓	✓
Fugitive Emissions From Mining, Processing, Storage, And Transportation Of Coal		✓	✓
Fugitive Emissions From Oil And Natural Gas Systems		✓	✓
On-Road Transportation		✓	✓
Railways		✓	✓
Waterborne Navigation		✓	✓
Aviation		✓	✓
Off-Road Transportation		✓	✓
Solid Waste	✓	✓	✓
Biological Waste	✓	✓	✓
Incinerated And Burned Waste		✓	✓
Wastewater		✓	✓
Emissions From Industrial Processes			✓
Emissions From Product Use			✓
Emissions From Livestock	✓		✓
Emissions From Land			✓
Emissions From Aggregate Sources And Non-CO <sub>2</sub> Emission Sources On Land	✓		✓

## 1.4 Purpose of Document

The purpose of this document is to provide the 2007 and 2022 GPC BASIC+ energy and GHG emissions inventories at the regional and local government level. This document compliments a 2022 inventory report which describes the methodologies and data sources applied to derive the estimate of GHG emissions for the CRD region and local governments.

## 2 INVENTORY SCOPE

### 2.1 GPC BASIC+ Inventory Scope

In accordance with the GPC Protocol, the 2007 and 2022 BASIC+ GHG inventories presented herein accounts for GHG emissions from the following Reporting Sectors:

- **Stationary Energy** – These are GHG emissions from fuel combustion, fugitive emissions, and some off-road transportation sources (e.g., construction equipment, residential mowers, etc.). They include the emissions from energy to heat and cool residential, commercial, institutional, and light/heavy industrial buildings, as well as the activities that occur within these residences and facilities.
- **Transportation** – These are GHG emissions from the combustion of fuels as a result of vehicular on-road, off-road, including marine, aviation, and other off-road, and trans-boundary journeys.
- **Waste** – These are GHG emissions from the disposal and management of solid waste, the biological treatment of waste, and wastewater treatment and discharge. Waste does not directly consume energy, but releases GHG emissions because of decomposition, burning, and other management methods.
- **Industrial Process and Product Use (IPPU)** – These are GHG emissions from products such as refrigerants, foams or aerosol cans can release potent GHG emissions, known as product use GHG emissions. There are no known industrial process emissions in the CRD.
- **Agriculture, Forestry and Other Land-Use (AFOLU)** – These are GHG emissions that are captured or released as a result of land-management activities. These activities can range from the preservation of forested lands to the development of crop land. This Sector includes GHG emissions from land-use change, manure management, livestock, and the direct and indirect release of nitrous oxides (N<sub>2</sub>O) from soil management, urea application, fertilizer and manure application.

Due to limitations in how to quantify GHG emissions resulting from land use change (e.g., residential development), these GHG emissions have been excluded from the GHG emissions inventories presented herein but have been disclosed.

## 2.2 GHG Emissions Boundary

The GHG inventories are defined geographically by the capital region of British Columbia, which includes 13 municipalities and 3 electoral areas, as shown in Figure 2.

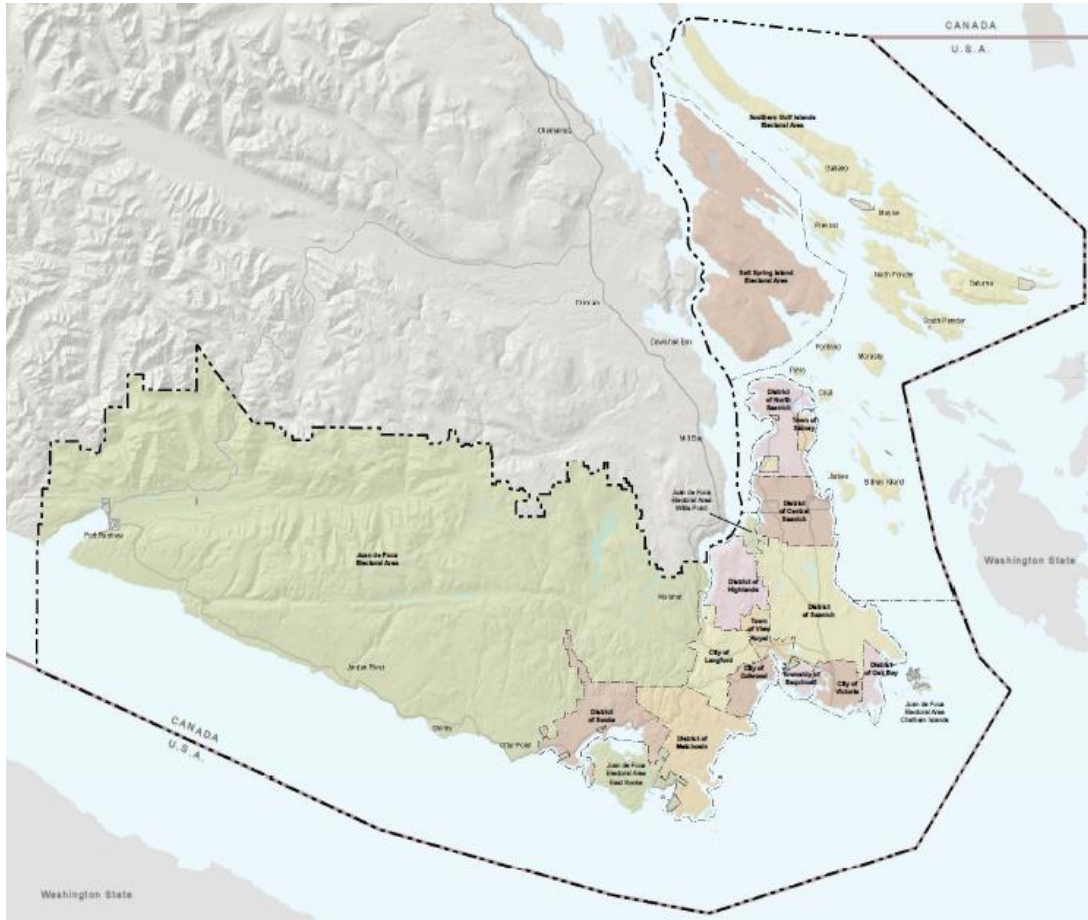


Figure 2 Regional GHG Boundary

## 2.3 Assumptions & Disclosures

The following inventories covers all GHG emissions for the 2007 and 2022 reporting years. Where data was not available, the most recent year's data have been used, and the timescale noted accordingly. These disclosures are as follows:

- Global Warming Potentials (GWP).** The BC government has communicated that is adopting GWPs from the fifth IPCC report. On this basis, the CRD is applying GWPs from the fifth IPCC report.
- Stationary Energy: Residential, Commercial and Institutional Buildings.** Propane, and wood GHG emissions were estimated using linear regression methods. The data used in the estimates included historical propane and wood energy data published in the 2007-2019 CEEIs, and heating degree days (HDD) published by Environment and Climate Change Canada.

- **Stationary Energy: Residential, Commercial and Institutional Buildings.** The CRD used real-estate sales data between 2019 and 2022 to estimate the number of heating oil tanks and average household consumption for the 2020 reporting year. The 2020 heating oil numbers were adjusted using a change in heating degree days between 2020 and 2022. This approach was used to estimate heating oil consumption for all local governments, except the City of Victoria and District of Saanich. For the District of Saanich and the City of Victoria, heating oil GHG emissions were estimated based on the number of known tanks, average heated floor areas and fuel volume intensity.
- **Stationary Energy: Fugitives.** Fortis BC provided total fugitive emissions for the 2020 reporting year at the CRD level. Since no historical numbers were provided, the 2020 value was used to estimate the 2022 emissions.
- **Stationary Energy: Other Off-Road.** The ECCC 2023 NIR prepared for the Province of BC for the 2021 reporting year was used to estimate GHG emissions for:
  - Off-road agriculture and forestry GHG emissions
  - Off-road commercial and institutional GHG emissions
  - Off-road manufacturing, mining and construction GHG emissions
  - Off-road residential GHG emissions

These GHG emissions were assigned to the CRD on a per capita basis.

- **Transportation: On-Road.** The on-road transportation emissions are based on the total estimated fuel sales in the CRD, and the number of registered vehicles. Insurance Corporation of BC (ICBC) compiles data on an April 1 to March 31 basis, and thus the current on-road GHG emission estimate is based on the number of registrations from April 1, 2022 – March 31, 2023.
- **Transportation: Aviation.** 2022 aviation GHG emissions were estimated using 2015 aircraft flight profiles (the last available data), and the total number of aircraft movements reported in 2022.
- **Transportation: Waterborne Recreational Watercraft.** GHG emissions from recreational watercraft and US/Canada ferries were estimated based on a publicly available year 2000 study for the Victoria, Vancouver, and Washington harbors.
- **Transportation: Cruise Ships.** The Greater Victoria Harbour Authority (GVHA) reported on cruise ship emissions for the 2018 reporting year but did not provide an estimate for 2022. As a result, the 2018 GHG emissions estimate and number of cruise ship visits to Ogden Point was used to create a proxy to estimate 2022 cruise ship emissions.
- **Waste: Solid Waste.** To quantify GHG emissions from the Hartland Landfill, the CRD utilized the waste-in-place (WIP) method which is accepted under the GPC Protocol. The WIP assigns landfill emissions based on total waste deposited during that year. It counts GHGs emitted that year, regardless of when the waste was disposed. Except for the City of Victoria, who claims 31% of the CRD's landfill GHG emission, the remaining landfill GHG emissions were allocated to each local government on a per capita basis. Using this allocation method, the CRD members may over, or underestimate associated solid waste GHG emissions as the current year landfill GHG emissions are based upon cumulative waste over time, and each member may have contributed more waste in past years than the current year (and vice versa).
- **AFOLU: Aggregate Sources And Non-CO<sub>2</sub> Emission Sources On Land.** These emissions are based on the 2023 NIR as prepared by ECCC and the total area of

farmland BC in 2021 as reported by Statistics Canada. These GHG emissions were assigned to each local government on a per hectare (ha) of cropland basis.

- **AFOLU: Land-Use.** The land cover change analysis requires a consistent land-use category attribution and spatial data. For parts of the CRD, spatial data was available for the 2007, 2011 and 2019 reporting years. Differences between these data sets in terms of resolution and their timing of collection increase the uncertainty as to the accuracy of the land-use classifications. For example, the 2007 and 2011 land use data was collected at different times of the year and may not accurately reflect tree cover. Furthermore, no land use spatial data was collected the Juan de Fuca, Salt Spring Island and Gulf Islands and thus Annual Crop Inventory (ACI) settlement data collected by Agriculture Canada was used to inform the analysis. The challenge in utilizing this data is that it is provided in a 30m resolution. Furthermore, since annual data is not available, the change between land cover data years (2007-2011, 2011-2019) for all areas was averaged and may not represent actual changes in each year. Since no data was available for 2022, the 2019 estimates were applied.

Due to limitations in how to quantify GHG emissions resulting from land use change (e.g., residential development), these GHG emissions have been excluded from the CRD's GHG emissions inventory, but have been disclosed, until a more robust measurement methodology can be developed.

Details surrounding all GHG emissions sources quantification methods, assumptions, and assessment of uncertainties are contained in a complimentary GHG emissions methodology document and are not presented herein.

# 3 CAPITAL REGIONAL DISTRICT ENERGY & GHG EMISSIONS

## 3.1 Base Year (2007) Energy & GHG Emissions

In 2007, the CRD's Regional GHG BASIC+ emissions totaled 2,004,628 tCO<sub>2</sub>e. Buildings are the CRD's second largest GHG emissions source at 35%, with 38% of those GHG emissions coming from natural gas for heating and cooling, 20% from heating oil for heating, 16% from electricity use, 7% from wood and propane use for heating and the remainder from other-related off-road activities like residential lawn mowing. On-road transportation GHG emission sources contributed 45% to the GHG inventory, almost all of which came from passenger vehicles, light trucks, and SUVs (83%). Off-road transportation, which includes marine, aviation, and other off-road emission sources contributed 7% to the overall GHG inventory. Solid waste, organic waste treatment methods, and wastewater treatment and discharge accounted for 7% of the total community GHG emissions. IPPU emissions accounted for 4% of total GHG emissions while AFOLU GHG emissions resulted for less than 1% of community GHG emissions.

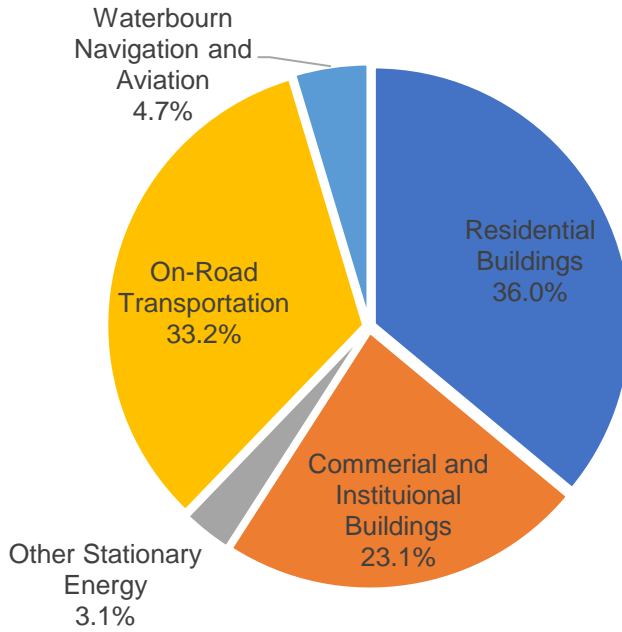
A summary of the GHG emissions by sector and energy use by source is presented in the Table 4.

**Table 4. Base Year (2007) CRD Regional GHG Energy & GHG Emissions by Source**

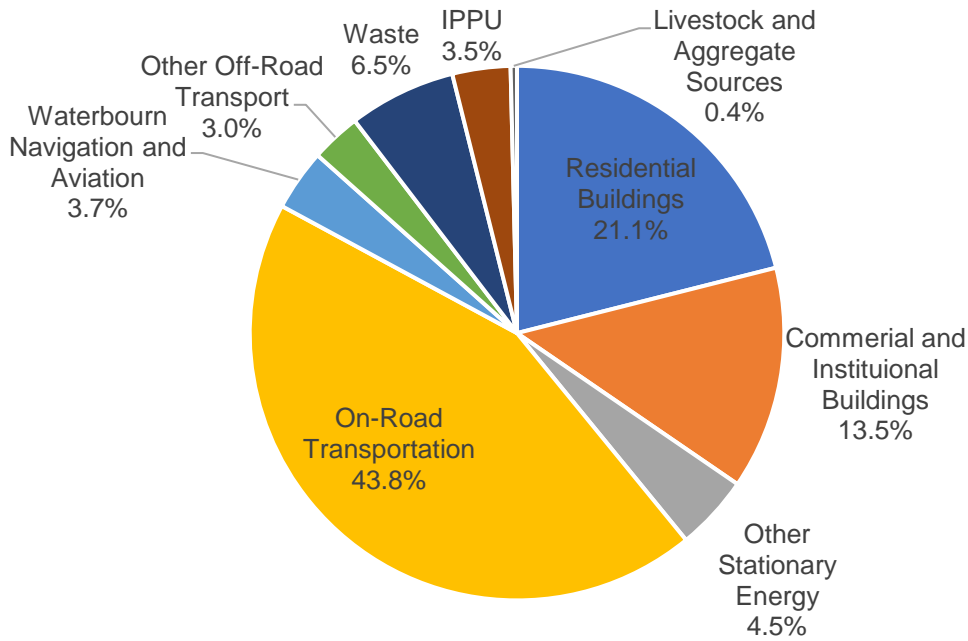
Source	Type	Consumption	Units	Energy (GJ)	GHG Emissions (tCO <sub>2</sub> e)
<b>Stationary Energy</b>					
Residential Buildings	Electricity	2,102,967	MWh	7,570,620	75,076
	Natural Gas	2,639,980	GJ	2,639,980	131,578
	Fuel Oil	83,335	L	2,147,821	146,807
	Propane	10,747	L	424,600	25,823
	Wood	1,144,369	GJ	1,144,369	29,398
	Diesel	4,760,958	L	184,154	13,574
Commercial & Industrial Buildings	Electricity	1,367,919	MWh	4,924,469	48,835
	Natural Gas	3,352,456	GJ	3,352,456	167,089
	Fuel Oil	6,272	L	161,638	11,048
	Diesel	15,274,984	L	590,836	43,552
Energy Industries	LFG Combustion				418
Agriculture, Forestry And Fishing Activities	Diesel	31,389,167	L	1,214,133	89,497
Natural Gas Fugitive Emissions					1,003
<b>Total</b>				<b>24,355,075</b>	<b>783,698</b>
<b>On-Road Transportation</b>					
Electric Vehicles	Electricity	51,201	MWh	0	0

Source	Type	Consumption	Units	Energy (GJ)	GHG Emissions (tCO <sub>2</sub> e)
Hydrogen Vehicles	Hydrogen	0	L	0	0
Passenger Vehicles	Gasoline + Diesel	163,062,222	L	5,673,042	381,743
Light Trucks, Vans, SUVs	Gasoline + Diesel	142,617,615	L	5,003,722	340,885
Heavy Duty Vehicles	Gasoline + Diesel	59,156,416	L	2,230,995	150,270
Propane Vehicles	Propane	1,322,222	L	33,756	2,037
Natural Gas Vehicles	Natural Gas	0	kg	0	0
Motorcycles	Gasoline	1,208,124	L	41,874	2,891
<b>Total On-Road Transportation</b>				<b>12,983,390</b>	<b>877,826</b>
<b>Off-Road Transportation</b>					
Marine, Aviation and Other Off-Road Vehicles	Marine Gasoline + Marine Diesel + Jet Fuel	48,137,749	L	1,821,683	134,944
<b>Total Off-Road Transportation</b>				<b>1,821,683</b>	<b>134,944</b>
<b>Waste</b>					
Wastewater					18,998
Composting					73
Solid Waste					110,955
<b>Total Waste</b>					<b>130,026</b>
<b>Agriculture Forestry &amp; Other Land Use (AFOLU)</b>					
Land-Use: Emissions Sequestered (Disclosure Only - Not Included In Total)					-396,487
Land-Use: Emissions Released (Disclosure Only - Not Included In Total)					151,516
Livestock, Aggregate Sources and Non-CO <sub>2</sub> Emission Sources on Land					7,716
<b>Total AFOLU</b>					<b>7,716</b>
<b>Industrial Process &amp; Product Use (IPPU)</b>					
Process Use Emissions					70,418
<b>Total IPPU</b>					<b>70,418</b>
<b>TOTAL</b>				<b>39,160,148</b>	<b>2,004,628</b>
<b>TOTAL Per Capita</b>				<b>110.1</b>	<b>5.6</b>

Energy consumption and GHG emissions by source are shown in **Figure 3**, **Figure 4** and **Figure 5**. On-road and transboundary transportation (82%) account for most of the energy consumption in the region.



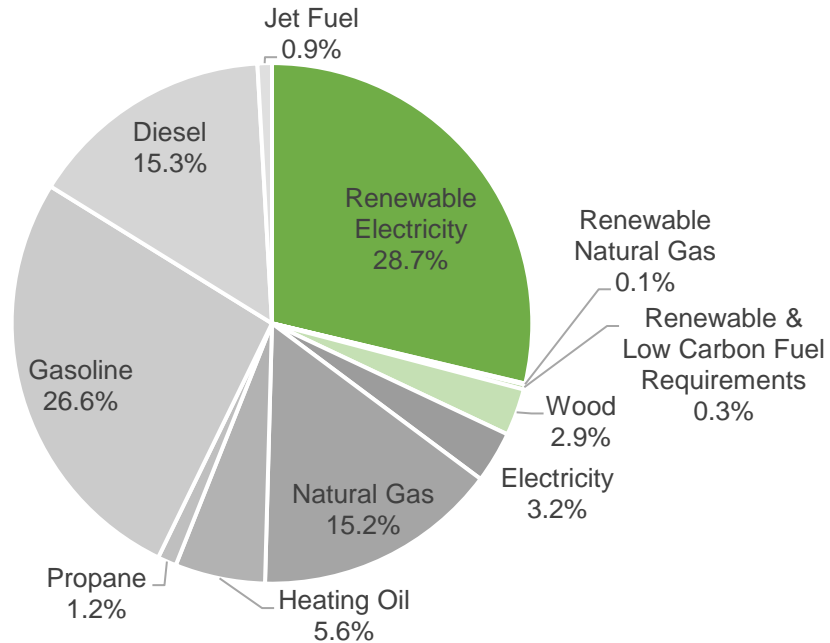
**Figure 3. 2007 Regional Energy Consumption By Sector**



**Figure 4. 2007 Regional GHG Emissions By Sector**

GHG emissions by fuel type is presented in **Figure 5**.





**Figure 5. 2007 Regional GHG Emissions By Fuel Type**

## 3.2 CRD GHG Reduction Target

Recognizing the role that the CRD plays in achieving a significant and immediate reduction in global GHG emissions, the CRD has set a regional GHG reduction target of 61% (from 2007 levels) by 2038. With the CRD's 2007 base year GHG emissions being 2,004,628 tCO<sub>2</sub>e, a 61% reduction would require a reduction of approximately 1,222,823 tCO<sub>2</sub>e. On a per capita basis, this amounts to reducing emissions from approximately 4.3 tCO<sub>2</sub>e per person in 2007 to 2.4 tCO<sub>2</sub>e per person by 2038.

In February 2019, the CRD declared a climate emergency and committed to regional carbon neutrality.

## 3.3 Reporting Year (2022) Energy & GHG Emissions

In 2022, the CRD's Regional BASIC+ GHG emissions totaled 1,858,325 tCO<sub>2</sub>. On an absolute basis, this is a 7% decline from the 2007 base year GHG emissions and a decline of 25% on a per capita basis.

Similar to the 2007 base year, buildings are the second largest GHG emissions source at 34%, with 52% of those GHG emissions coming from natural gas for heating and cooling, 7% from heating oil for heating, 6% from electricity use, 8% from wood and propane use for heating and the remainder from other-related off-road activities like residential lawn mowing. On-road transportation GHG emission sources contributed 50%, almost all of which came from passenger vehicles, light trucks, and SUVs (84%). Off-road transportation, which includes marine, aviation, and other off-road emission sources contributed 9% to the overall GHG inventory. Solid waste, organic waste treatment methods, and wastewater treatment and discharge accounted for 3% of the total community GHG emissions. IPPU emissions accounted for 7% of total GHG emissions while AFOLU GHG emissions contributed to less than 1% of community GHG emissions.

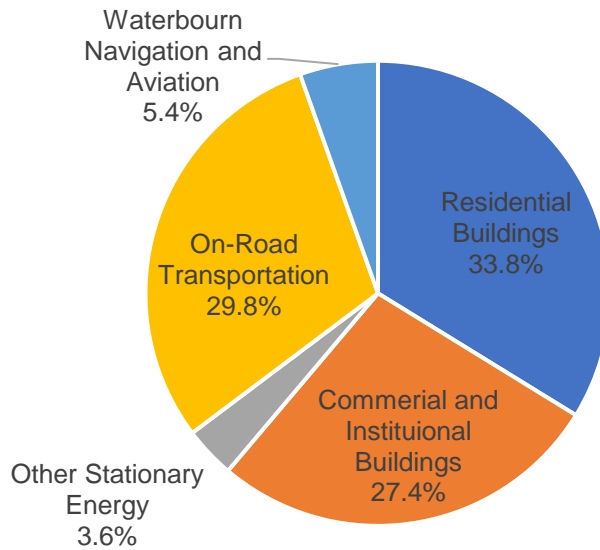
A summary of the 2022 GHG emissions by sector and energy use by source is presented in the following table and figures.

**Table 5. Reporting Year (2022) CRD Regional GHG Energy & GHG Emissions by Sector**

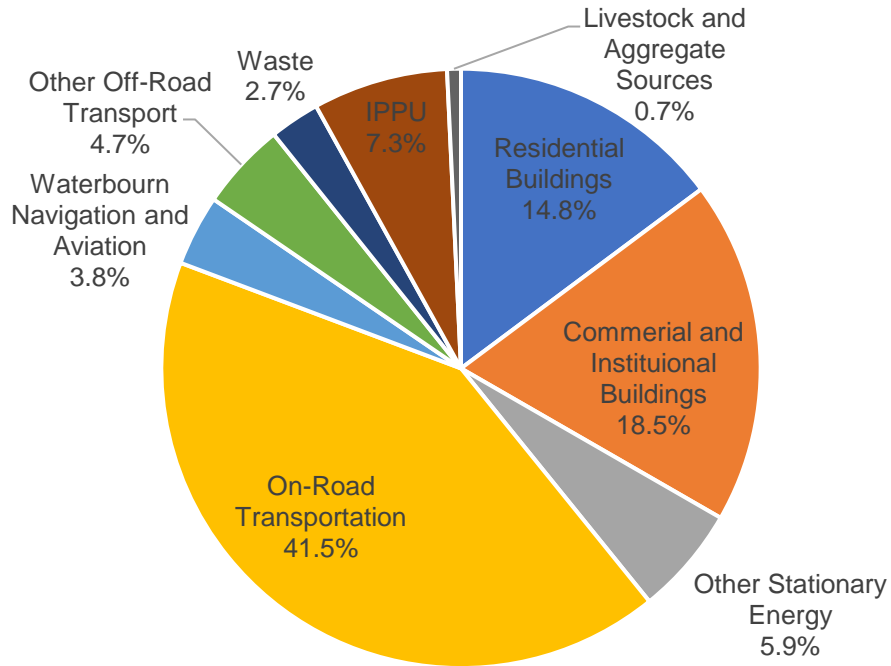
Source	Type	Consumption	Units	Energy (GJ)	GHG Emissions (tCO <sub>2</sub> e)
<b>Stationary Energy</b>					
Residential Buildings	Electricity	2,283,344	MWh	8,219,973	26,258
	Natural Gas	2,781,030	GJ	2,781,030	141,472
	Fuel Oil	23,978	L	617,980	42,240
	Propane	10,662	L	421,254	25,703
	Wood	1,123,230	GJ	1,123,230	28,855
	Diesel	3,788,739	L	146,548	10,516
Commercial & Industrial Buildings	Electricity	1,349,063	MWh	4,856,588	15,514
	Natural Gas	4,628,325	GJ	4,628,325	235,444
	Fuel Oil	5,549	L	143,003	9,775
	Diesel	30,002,730	L	1,160,506	83,278
Energy Industries	LFG Combustion				6,497
Agriculture, Forestry And Fishing Activities	Diesel	36,399,960	L	1,407,950	101,034
Natural Gas Fugitive Emissions					1,510
<b>Total</b>				<b>25,506,387</b>	<b>728,096</b>
<b>On-Road Transportation</b>					
Electric Vehicles	Electricity	128,302	MWh	62	198
Hydrogen Vehicles	Hydrogen	0	L	0	0
Passenger Vehicles	Gasoline + Diesel	79,275,557	L	2,758,167	179,829
Light Trucks, Vans, SUVs	Gasoline + Diesel	200,102,167	L	7,030,899	464,227
Heavy Duty Vehicles	Gasoline + Diesel	51,162,912	L	1,893,194	123,783
Propane Vehicles	Propane	634,856	L	16,208	920
Natural Gas Vehicles	Natural Gas	192,612	kg	10	45
Motorcycles	Gasoline	1,395,105	L	48,354	3,128
<b>Total On-Road Transportation</b>				<b>11,746,895</b>	<b>772,129</b>
<b>Off-Road Transportation</b>					
Marine, Aviation and Other Off-Road Vehicles	Marine Gasoline + Marine Diesel + Jet Fuel	56,042,010	L	2,143,589	158,527
<b>Total Off-Road Transportation</b>				<b>2,143,589</b>	<b>158,527</b>
<b>Waste</b>					
Wastewater					4,975
Composting					5,602

Source	Type	Consumption	Units	Energy (GJ)	GHG Emissions (tCO <sub>2</sub> e)
Solid Waste					39,699
<b>Total Waste</b>					<b>50,275</b>
<b>Agriculture Forestry &amp; Other Land Use (AFOLU)</b>					
Land-Use: Emissions Sequestered (Disclosure Only - Not Included In Total)					-401,842
Land-Use: Emissions Released (Disclosure Only - Not Included In Total)					89,610
Livestock, Aggregate Sources and Non-CO <sub>2</sub> Emission Sources on Land					13,837
<b>Total AFOLU</b>					<b>13,837</b>
<b>Industrial Process &amp; Product Use (IPPU)</b>					
Process Use Emissions					135,461
<b>Total IPPU</b>					<b>135,461</b>
<b>TOTAL</b>				<b>39,396,871</b>	<b>1,858,325</b>
<b>TOTAL Per Capita</b>				<b>89.5</b>	<b>4.2</b>

Energy consumption and GHG emissions by source are shown in **Figure 6**, **Figure 7** and **Figure 8**.

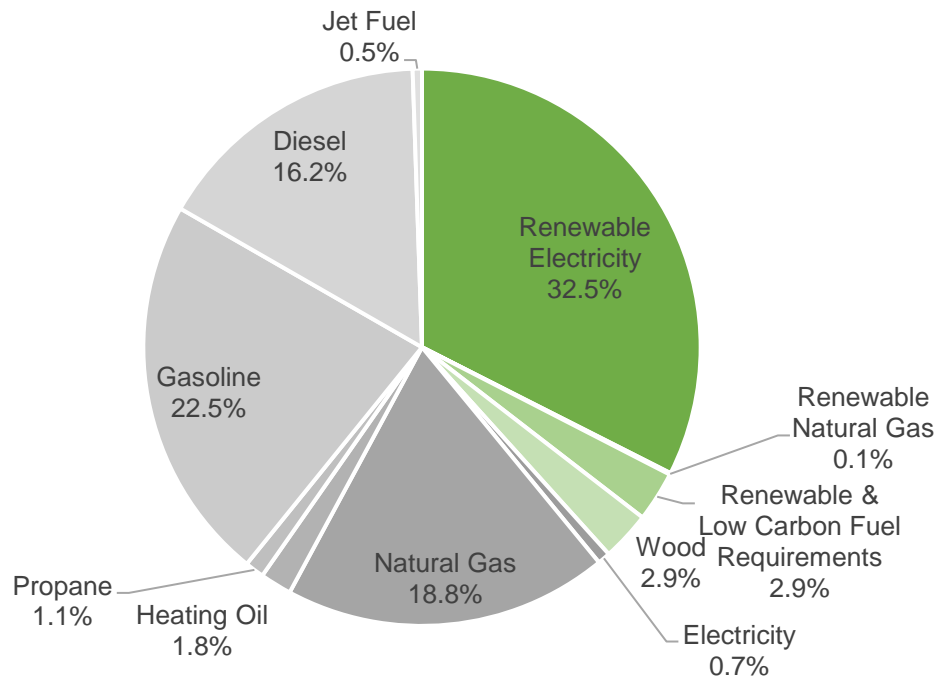


**Figure 6. 2022 Regional Energy Consumption By Sector**



**Figure 7. 2022 Regional GHG Emissions By Sector**

GHG emissions by fuel type is presented in **Figure 8**.



**Figure 8. 2022 Regional GHG Emissions By Fuel Type**

## 3.4 Energy & GHG Emissions Trends

**Table 6** presents the changes between the 2007 and 2022 reporting years. Compared to the 2007 GHG emissions inventory, the 2022 GHG emissions have declined by 7.3%. Overall, GHG emissions related to buildings and transportation decreased due to lower emission factors (applicable to electricity), commuting behavior changes (people working from home and driving less), improved vehicle fuel efficiency and a shift away from inefficient vehicles towards electric vehicles and other modal shifts.

The table below shows that residential and commercial building energy consumption increased while the related GHG emissions decreased. The change in GHG emissions is related to the greening of the electrical grid and a change in how the province quantifies electricity GHG emissions in BC.<sup>2</sup> Industry GHG emissions have increased since the 2007 base year which is hidden by the overall reduction in Stationary Energy at the regional district scale.

On-road transportation GHG emissions have decreased despite an increase in vehicle registrations between 2007 and 2022. Origin destination data shows that while the COVID restrictions have been lifted, there are less people commuting to work. Increased uptake of electric vehicles and improved light duty vehicle fuel efficiency have also contributed to this decrease. Off-road aviation and waterborne transportation GHG emissions have increased 17% as compared to 2007 due to an increase in population in the CRD and an increase in overall travel and tourism.

There was a decrease in GHG emissions from solid waste and an increase in composting emissions which is directly related to an increase in population and the CRD and member municipalities efforts to divert organic waste away from the landfill. Increased efforts by the CRD to capture and utilize landfill fugitive gas has also reduced solid waste GHG emissions. Wastewater GHG emissions have also declined as a result of the CRD implementing wastewater treatment systems.

Although not accounted for the totals, the land-use change emissions estimates show a release of ecosystem carbon. A refinement in data and methodological processes is required to identify as to what would be root cause.

Industrial process and product use GHG emissions (e.g., solvent use, refrigerant release from air conditioning systems) have increased between 2007 and 2022. The increase is largely driven by the methodology deployed which relied on assigning these GHG emissions on a per capita basis and more so, the direct result of Environment Canada and Climate Change (ECCC) refining their estimation methodology which resulted in a more than doubling of the estimate.

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<sup>2</sup> The updated methodology measures "net imports" instead of "gross imports" to more accurately reflect the carbon intensity of electricity consumed in BC. [Electricity emission intensity factors for grid-connected entities - Province of British Columbia \(gov.bc.ca\)](https://www2.gov.bc.ca/gov2/electricity_emission_intensity_factors_for_grid-connected_entities_-_Province_of_British_Columbia_(gov.bc.ca))

**Table 6. Change in CRD GHG Energy & GHG Emissions**

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
<b>Stationary Energy</b>							
Residential Buildings	Electricity	7,570,620	8,219,973	8.6%	75,076	26,258	-65.0%
	Natural Gas	2,639,980	2,781,030	5.3%	131,578	141,472	7.5%
	Fuel Oil	2,147,821	617,980	-71.2%	146,807	42,240	-71.2%
	Propane	424,600	421,254	-0.8%	25,823	25,703	-0.5%
	Wood	1,144,369	1,123,230	-1.8%	29,398	28,855	-1.8%
	Diesel	184,154	146,548	-20.4%	13,574	10,516	-22.5%
Commercial & Industrial Buildings	Electricity	4,924,469	4,856,588	-1.4%	48,835	15,514	-68.2%
	Natural Gas	3,352,456	4,628,325	38.1%	167,089	235,444	40.9%
	Fuel Oil	161,638	143,003	-11.5%	11,048	9,775	-11.5%
	Diesel	590,836	1,160,506	96.4%	43,552	83,278	91.2%
Energy Industries	LFG Combustion			-	418	6,497	1454.3%
Agriculture, Forestry And Fishing Activities	Diesel	1,214,133	1,407,950	16.0%	89,497	101,034	12.9%
Natural Gas Fugitive Emissions				-	1,003	1,510	50.6%
<b>Total</b>		<b>24,355,075</b>	<b>25,506,387</b>	<b>4.7%</b>	<b>783,698</b>	<b>728,096</b>	<b>-7.1%</b>
<b>On-Road Transportation</b>							
Electric Vehicles	Electricity	-	62	-	-	198	-
Hydrogen Vehicles	Hydrogen	-	-	-	-	-	-
Passenger Vehicles	Gasoline + Diesel	5,673,042	2,758,167	-51.4%	381,743	179,829	-52.9%
Light Trucks, Vans, SUVs	Gasoline + Diesel	5,003,722	7,030,899	40.5%	340,885	464,227	36.2%
Heavy Duty Vehicles	Gasoline + Diesel	2,230,995	1,893,194	-15.1%	150,270	123,783	-17.6%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
Propane Vehicles	Propane	33,756	16,208	-52.0%	2,037	920	-54.8%
Natural Gas Vehicles	Natural Gas	-	10	-	-	45	-
Motorcycles	Gasoline	41,874	48,354	15.5%	2,891	3,128	8.2%
<b>Total On-Road Transportation</b>		<b>12,983,390</b>	<b>11,746,895</b>	<b>-9.5%</b>	<b>877,826</b>	<b>772,129</b>	<b>-12.0%</b>
<b>Off-Road Transportation</b>							
Marine, Aviation and Other Off-Road Vehicles	Gasoline + Diesel + Jet Fuel	1,821,683	2,143,589	17.7%	134,944	158,527	17.5%
<b>Total Off-Road Transportation</b>		<b>1,821,683</b>	<b>2,143,589</b>	<b>17.7%</b>	<b>134,944</b>	<b>158,527</b>	<b>17.5%</b>
<b>Waste</b>							
Wastewater					18,998	4,975	-73.8%
Composting					73	5,602	7557.7%
Solid Waste					110,955	39,699	-64.2%
<b>Total Waste</b>					<b>130,026</b>	<b>50,275</b>	<b>-61.3%</b>
<b>Agriculture Forestry &amp; Other Land Use (AFOLU)</b>							
Land-Use: Emissions Sequestered (Disclosure Only - Not Included In Total)					-396,487	-401,842	1.4%
Land-Use: Emissions Released (Disclosure Only - Not Included In Total)					151,516	89,610	-40.9%
Livestock, Aggregate Sources and Non-CO <sub>2</sub> Emission Sources on Land					7,716	13,837	79.3%
<b>Total AFOLU</b>					<b>7,716</b>	<b>13,837</b>	<b>79.3%</b>
<b>Industrial Process &amp; Product Use (IPPU)</b>							
Process Use Emissions					70,418	135,461	92.4%
<b>Total IPPU</b>					<b>70,418</b>	<b>135,461</b>	<b>92.4%</b>
<b>TOTAL</b>		<b>39,160,148</b>	<b>39,396,871</b>	<b>0.6%</b>	<b>2,004,628</b>	<b>1,858,325</b>	<b>-7.3%</b>

Table 7 presents the changes between the 2007 and 2022 years for each CRD local government.

**Table 7. Change in Member GHG Energy & GHG Emissions**

Member	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
District of Central Saanich	1,899,678	2,167,736	14.1%	100,771	111,246	10.4%
City of Colwood	1,564,731	1,682,007	7.5%	84,132	84,570	0.5%
Township of Esquimalt	1,790,634	1,597,949	-10.8%	96,206	74,246	-22.8%
District of Highlands	224,145	300,539	34.1%	11,901	15,019	26.2%
Juan de Fuca Electoral Area	1,293,256	937,656	-27.5%	63,610	32,598	-48.8%
City of Langford	2,642,187	4,139,276	56.7%	137,319	202,749	47.6%
District of Metchosin	525,440	535,995	2.0%	28,165	26,425	-6.2%
District of North Saanich	1,345,969	1,436,531	6.7%	65,819	63,971	-2.8%
District of Oak Bay	1,671,340	1,520,022	-9.1%	90,308	74,984	-17.0%
District of Saanich	11,256,692	10,288,081	-8.6%	593,359	507,791	-14.4%
Salt Spring Island Electoral Area	1,079,295	1,181,612	9.5%	50,023	50,992	1.9%
Town of Sidney	1,258,133	1,195,902	-4.9%	64,104	55,426	-13.5%
District of Sooke	983,346	1,302,000	32.4%	52,539	64,405	22.6%
City of Victoria	9,876,133	9,193,993	-6.9%	483,269	407,082	-15.8%
Town of View Royal	982,469	1,069,552	8.9%	51,087	51,486	0.8%
Southern Gulf Islands Electoral Area	766,699	848,020	10.6%	32,015	35,335	10.4%



## 4 DISTRICT OF CENTRAL SAANICH

### 4.1 2022 Profile

Profile	
Population	19,070
Dwellings	7,933
Registered Vehicles	18,981
Energy (Thousands of GJ)	2,168
GHG Emissions (tCO <sub>2</sub> e)	111,246

### 4.2 Energy & GHG Emissions

**Table 8** presents a summary comparison of the District of Central Saanich's 2007 and 2022 energy and GHG emissions.

**Table 8. Estimated Energy and GHG Emissions By Reporting Source**

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
<b>Stationary Energy</b>							
Residential Buildings	Electricity	400,574	362,855	-9.4%	3,972	1,159	-70.8%
	Natural Gas	101,999	145,249	42.4%	5,084	7,389	45.3%
	Fuel Oil	18,644	15,794	-15.3%	1,274	1,080	-15.3%
	Propane	3,220	3,179	-1.3%	196	194	-0.9%
	Wood	7,150	6,905	-3.4%	184	177	-3.4%
	Diesel	8,496	6,352	-25.2%	626	456	-27.2%
Commercial & Industrial Buildings	Electricity	231,056	270,135	16.9%	2,291	863	-62.3%
	Natural Gas	152,986	176,742	15.5%	7,625	8,991	17.9%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
	Fuel Oil	-	-	-	-	-	-
	Diesel	27,258	50,303	84.5%	2,009	3,610	79.7%
Energy Industries	LFG Combustion			-	-	-	-
Agriculture, Forestry And Fishing Activities	Diesel	83,613	88,306	5.6%	6,163	6,337	2.8%
Natural Gas Fugitive Emissions				-	57	81	44.0%
<b>Total</b>		<b>1,034,994</b>	<b>1,125,820</b>	<b>8.8%</b>	<b>29,482</b>	<b>30,337</b>	<b>2.9%</b>
<b>On-Road Transportation</b>							
Electric Vehicles	Electricity	-	4	-	-	13	-
Hydrogen Vehicles	Hydrogen	-	-	-	-	-	-
Passenger Vehicles	Gasoline + Diesel	278,538	156,998	-43.6%	18,746	10,241	-45.4%
Light Trucks, Vans, SUVs	Gasoline + Diesel	324,185	462,004	42.5%	22,087	30,533	38.2%
Heavy Duty Vehicles	Gasoline + Diesel	179,813	338,365	88.2%	12,135	21,990	81.2%
Propane Vehicles	Propane	2,375	1,006	-57.7%	143	57	-60.2%
Natural Gas Vehicles	Natural Gas	-	-	-	-	-	-
Motorcycles	Gasoline	2,245	2,537	13.0%	155	164	5.9%
<b>Total On-Road Transportation</b>		<b>787,157</b>	<b>960,914</b>	<b>22.1%</b>	<b>53,267</b>	<b>62,997</b>	<b>18.3%</b>
<b>Off-Road Transportation</b>							
Marine, Aviation and Other Off-Road Vehicles	Gasoline + Diesel + Jet Fuel	77,527	81,002	4.5%	5,741	5,985	4.3%
<b>Total Off-Road Transportation</b>		<b>77,527</b>	<b>81,002</b>	<b>4.5%</b>	<b>5,741</b>	<b>5,985</b>	<b>4.3%</b>
<b>Waste</b>							
Wastewater					668	189	-71.6%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
Composting					0	149	-
Solid Waste					5,119	1,522	-70.3%
<b>Total Waste</b>					<b>5,786</b>	<b>1,860</b>	<b>-67.9%</b>
<b>Agriculture Forestry &amp; Other Land Use (AFOLU)</b>							
Land-Use: Emissions Sequestered (Disclosure Only - Not Included In Total)					-5,014	-4,844	-3.4%
Land-Use: Emissions Released (Disclosure Only - Not Included In Total)					5,925	154	-97.4%
Livestock, Aggregate Sources and Non-CO <sub>2</sub> Emission Sources on Land					3,246	4,135	27.4%
<b>Total AFOLU</b>					<b>3,246</b>	<b>4,135</b>	<b>27.4%</b>
<b>Industrial Process &amp; Product Use (IPPU)</b>							
Process Use Emissions					3,249	5,932	82.6%
<b>Total IPPU</b>					<b>3,249</b>	<b>5,932</b>	<b>82.6%</b>
<b>TOTAL</b>		<b>1,899,678</b>	<b>2,167,736</b>	<b>14.1%</b>	<b>100,771</b>	<b>111,246</b>	<b>10.4%</b>

# 5 CITY OF COLWOOD

## 5.1 2022 Profile

Profile	
Population	21,147
Dwellings	7,672
Registered Vehicles	15,482
Energy (Thousands of GJ)	1,682
GHG Emissions (tCO <sub>2</sub> e)	84,570

## 5.2 Energy & GHG Emissions

**Table 9** presents a summary comparison of the City of Colwood's 2007 and 2022 energy and GHG emissions.

**Table 9. Estimated Energy and GHG Emissions By Reporting Source**

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
<b>Stationary Energy</b>							
Residential Buildings	Electricity	304,680	357,600	17.4%	3,021	1,142	-62.2%
	Natural Gas	100,740	181,279	79.9%	5,021	9,222	83.7%
	Fuel Oil	65,936	27,224	-58.7%	4,507	1,861	-58.7%
	Propane	11,388	11,244	-1.3%	693	686	-0.9%
	Wood	25,284	24,416	-3.4%	650	627	-3.4%
	Diesel	8,131	7,044	-13.4%	599	505	-15.7%
Commercial & Industrial Buildings	Electricity	159,630	135,834	-14.9%	1,583	434	-72.6%
	Natural Gas	94,097	105,119	11.7%	4,690	5,347	14.0%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
	Fuel Oil	-	-	-	-	-	-
	Diesel	26,087	55,782	113.8%	1,923	4,003	108.2%
Energy Industries	LFG Combustion			-	-	-	-
Agriculture, Forestry And Fishing Activities	Diesel	80,021	97,924	22.4%	5,899	7,027	19.1%
Natural Gas Fugitive Emissions				-	61	111	82.9%
<b>Total</b>		<b>875,994</b>	<b>1,003,466</b>	<b>14.6%</b>	<b>28,646</b>	<b>30,966</b>	<b>8.1%</b>
<b>On-Road Transportation</b>							
Electric Vehicles	Electricity	-	3	-	-	10	-
Hydrogen Vehicles	Hydrogen	-	-	-	-	-	-
Passenger Vehicles	Gasoline + Diesel	233,329	146,676	-37.1%	15,699	9,563	-39.1%
Light Trucks, Vans, SUVs	Gasoline + Diesel	265,308	371,902	40.2%	18,074	24,562	35.9%
Heavy Duty Vehicles	Gasoline + Diesel	112,318	67,158	-40.2%	7,572	4,390	-42.0%
Propane Vehicles	Propane	1,441	686	-52.4%	87	39	-55.2%
Natural Gas Vehicles	Natural Gas	-	0	-	-	2	-
Motorcycles	Gasoline	2,145	2,293	6.9%	148	148	0.1%
<b>Total On-Road Transportation</b>		<b>614,540</b>	<b>588,717</b>	<b>-4.2%</b>	<b>41,580</b>	<b>38,713</b>	<b>-6.9%</b>
<b>Off-Road Transportation</b>							
Marine, Aviation and Other Off-Road Vehicles	Gasoline + Diesel + Jet Fuel	74,196	89,824	21.1%	5,494	6,637	20.8%
<b>Total Off-Road Transportation</b>		<b>74,196</b>	<b>89,824</b>	<b>21.1%</b>	<b>5,494</b>	<b>6,637</b>	<b>20.8%</b>
<b>Waste</b>							
Wastewater					397	153	-61.5%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
Composting					0	57	-
Solid Waste					4,899	1,688	-65.5%
<b>Total Waste</b>					<b>5,296</b>	<b>1,897</b>	<b>-64.2%</b>
<b>Agriculture Forestry &amp; Other Land Use (AFOLU)</b>							
Land-Use: Emissions Sequestered (Disclosure Only - Not Included In Total)					-2,536	-3,254	28.3%
Land-Use: Emissions Released (Disclosure Only - Not Included In Total)					2,482	2,755	11.0%
Livestock, Aggregate Sources and Non-CO <sub>2</sub> Emission Sources on Land					6	-1	-107.8%
<b>Total AFOLU</b>					<b>6</b>	<b>-1</b>	<b>-107.8%</b>
<b>Industrial Process &amp; Product Use (IPPU)</b>							
Process Use Emissions					3,109	6,357	104.5%
<b>Total IPPU</b>					<b>3,109</b>	<b>6,357</b>	<b>104.5%</b>
<b>TOTAL</b>		<b>1,564,731</b>	<b>1,682,007</b>	<b>7.5%</b>	<b>84,132</b>	<b>84,570</b>	<b>0.5%</b>

## 6 TOWNSHIP OF ESQUIMALT

### 6.1 2022 Profile

Profile	
Population	19,536
Dwellings	9,438
Registered Vehicles	11,254
Energy (Thousands of GJ)	1,598
GHG Emissions (tCO <sub>2</sub> e)	74,246

### 6.2 Energy & GHG Emissions

**Table 10** presents a summary comparison of the Township of Esquimalt's 2007 and 2022 energy and GHG emissions.

**Table 10. Estimated Energy and GHG Emissions By Reporting Source**

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
<b>Stationary Energy</b>							
Residential Buildings	Electricity	282,544	290,356	2.8%	2,802	928	-66.9%
	Natural Gas	133,315	94,996	-28.7%	6,644	4,832	-27.3%
	Fuel Oil	116,338	22,923	-80.3%	7,952	1,567	-80.3%
	Propane	20,190	19,934	-1.3%	1,228	1,216	-0.9%
	Wood	44,358	42,835	-3.4%	1,140	1,100	-3.4%
	Diesel	9,121	6,507	-28.7%	672	467	-30.5%
Commercial & Industrial Buildings	Electricity	167,991	214,378	27.6%	1,666	685	-58.9%
	Natural Gas	323,843	349,511	7.9%	16,141	17,780	10.2%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
	Fuel Oil	-	-	-	-	-	-
	Diesel	29,264	51,532	76.1%	2,157	3,698	71.4%
Energy Industries	LFG Combustion			-	-	-	-
Agriculture, Forestry And Fishing Activities	Diesel	-	-	-	-	-	-
Natural Gas Fugitive Emissions				-	44	55	23.7%
<b>Total</b>		<b>1,126,964</b>	<b>1,092,973</b>	<b>-3.0%</b>	<b>40,446</b>	<b>32,328</b>	<b>-20.1%</b>
<b>On-Road Transportation</b>							
Electric Vehicles	Electricity	-	2	-	-	7	-
Hydrogen Vehicles	Hydrogen	-	-	-	-	-	-
Passenger Vehicles	Gasoline + Diesel	263,197	125,075	-52.5%	17,709	8,156	-53.9%
Light Trucks, Vans, SUVs	Gasoline + Diesel	215,762	239,116	10.8%	14,699	15,785	7.4%
Heavy Duty Vehicles	Gasoline + Diesel	97,257	54,443	-44.0%	6,543	3,555	-45.7%
Propane Vehicles	Propane	1,908	1,208	-36.7%	115	69	-40.4%
Natural Gas Vehicles	Natural Gas	-	1	-	-	2	-
Motorcycles	Gasoline	2,312	2,151	-7.0%	160	139	-12.9%
<b>Total On-Road Transportation</b>		<b>580,437</b>	<b>421,996</b>	<b>-27.3%</b>	<b>39,226</b>	<b>27,713</b>	<b>-29.4%</b>
<b>Off-Road Transportation</b>							
Marine, Aviation and Other Off-Road Vehicles	Gasoline + Diesel + Jet Fuel	83,234	82,981	-0.3%	6,163	6,131	-0.5%
<b>Total Off-Road Transportation</b>		<b>83,234</b>	<b>82,981</b>	<b>-0.3%</b>	<b>6,163</b>	<b>6,131</b>	<b>-0.5%</b>
<b>Waste</b>							
Wastewater					1,388	356	-74.4%



Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
Composting					0	144	-
Solid Waste					5,496	1,559	-71.6%
<b>Total Waste</b>					<b>6,883</b>	<b>2,059</b>	<b>-70.1%</b>
<b>Agriculture Forestry &amp; Other Land Use (AFOLU)</b>							
Land-Use: Emissions Sequestered (Disclosure Only - Not Included In Total)					-828	-1,178	42.3%
Land-Use: Emissions Released (Disclosure Only - Not Included In Total)					1,155	1,284	11.2%
Livestock, Aggregate Sources and Non-CO <sub>2</sub> Emission Sources on Land					0	0	-
<b>Total AFOLU</b>					<b>0</b>	<b>0</b>	<b>-</b>
<b>Industrial Process &amp; Product Use (IPPU)</b>							
Process Use Emissions					3,488	6,015	72.5%
<b>Total IPPU</b>					<b>3,488</b>	<b>6,015</b>	<b>72.5%</b>
<b>TOTAL</b>		<b>1,790,634</b>	<b>1,597,949</b>	<b>-10.8%</b>	<b>96,206</b>	<b>74,246</b>	<b>-22.8%</b>

# 7 DISTRICT OF HIGHLANDS

## 7.1 2022 Profile

Profile	
Population	2,980
Dwellings	957
Registered Vehicles	3,116
Energy (Thousands of GJ)	301
GHG Emissions (tCO <sub>2</sub> e)	15,019

## 7.2 Energy & GHG Emissions

**Table 11** presents a summary comparison of the District of Highland's 2007 and 2022 energy and GHG emissions.

**Table 11. Estimated Energy and GHG Emissions By Reporting Source**

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
<b>Stationary Energy</b>							
Residential Buildings	Electricity	63,637	74,980	17.8%	631	240	-62.0%
	Natural Gas	69	5,263	7478.3%	3	268	7634.9%
	Fuel Oil	9,468	1,106	-88.3%	647	76	-88.3%
	Propane	1,633	1,612	-1.3%	99	98	-0.9%
	Wood	3,637	3,512	-3.4%	93	90	-3.4%
	Diesel	1,150	993	-13.7%	85	71	-16.0%
Commercial & Industrial Buildings	Electricity	6,447	15,188	135.6%	64	49	-24.1%
	Natural Gas	20,440	20,362	-0.4%	1,019	1,036	1.7%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
	Fuel Oil	-	-	-	-	-	-
	Diesel	3,689	7,861	113.1%	272	564	107.4%
Energy Industries	LFG Combustion			-	-	-	-
Agriculture, Forestry And Fishing Activities	Diesel	11,317	13,799	21.9%	834	990	18.7%
Natural Gas Fugitive Emissions				-	0	3	1559.9%
<b>Total</b>		<b>121,486</b>	<b>144,676</b>	<b>19.1%</b>	<b>3,748</b>	<b>3,484</b>	<b>-7.0%</b>
<b>On-Road Transportation</b>							
Electric Vehicles	Electricity	-	1	-	-	2	-
Hydrogen Vehicles	Hydrogen	-	-	-	-	-	-
Passenger Vehicles	Gasoline + Diesel	25,510	23,909	-6.3%	1,718	1,559	-9.2%
Light Trucks, Vans, SUVs	Gasoline + Diesel	43,712	88,140	101.6%	2,979	5,831	95.7%
Heavy Duty Vehicles	Gasoline + Diesel	21,839	30,503	39.7%	1,472	2,009	36.5%
Propane Vehicles	Propane	779	158	-79.7%	47	9	-80.9%
Natural Gas Vehicles	Natural Gas	-	0	-	-	0	-
Motorcycles	Gasoline	327	495	51.2%	23	32	41.7%
<b>Total On-Road Transportation</b>		<b>92,166</b>	<b>143,205</b>	<b>55.4%</b>	<b>6,238</b>	<b>9,442</b>	<b>51.4%</b>
<b>Off-Road Transportation</b>							
Marine, Aviation and Other Off-Road Vehicles	Gasoline + Diesel + Jet Fuel	10,493	12,658	20.6%	777	935	20.4%
<b>Total Off-Road Transportation</b>		<b>10,493</b>	<b>12,658</b>	<b>20.6%</b>	<b>777</b>	<b>935</b>	<b>20.4%</b>
<b>Waste</b>							
Wastewater					0	0	-

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
Composting					0	0	-
Solid Waste					693	238	-65.7%
<b>Total Waste</b>					<b>693</b>	<b>238</b>	<b>-65.6%</b>
<b>Agriculture Forestry &amp; Other Land Use (AFOLU)</b>							
Land-Use: Emissions Sequestered (Disclosure Only - Not Included In Total)					-7,090	-7,521	6.1%
Land-Use: Emissions Released (Disclosure Only - Not Included In Total)					1,957	3,157	61.4%
Livestock, Aggregate Sources and Non-CO <sub>2</sub> Emission Sources on Land					6	14	146.3%
<b>Total AFOLU</b>					<b>6</b>	<b>14</b>	<b>146.3%</b>
<b>Industrial Process &amp; Product Use (IPPU)</b>							
Process Use Emissions					440	905	105.9%
<b>Total IPPU</b>					<b>440</b>	<b>905</b>	<b>105.9%</b>
<b>TOTAL</b>		<b>224,145</b>	<b>300,539</b>	<b>34.1%</b>	<b>11,901</b>	<b>15,019</b>	<b>26.2%</b>

## 8 JUAN DE FUCA ELECTORAL AREA

### 8.1 2022 Profile

Profile	
Population	6,032
Dwellings	2,281
Registered Vehicles	4,680
Energy (Thousands of GJ)	938
GHG Emissions (tCO <sub>2</sub> e)	32,598

### 8.2 Energy & GHG Emissions

**Table 12** presents a summary comparison of Juan de Fuca Electoral Area's 2007 and 2022 energy and GHG emissions.

**Table 12. Estimated Energy and GHG Emissions By Reporting Source**

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
<b>Stationary Energy</b>							
	Electricity	275,784	315,854	14.5%	2,735	1,009	-63.1%
	Natural Gas	-	-	-	-	-	-
Residential Buildings	Fuel Oil	442,152	6,268	-98.6%	30,222	428	-98.6%
	Propane	82,743	81,694	-1.3%	5,032	4,985	-0.9%
	Wood	184,018	177,700	-3.4%	4,727	4,565	-3.4%
	Diesel	2,380	2,009	-15.6%	175	144	-17.8%
Commercial & Industrial Buildings	Electricity	47,620	78,692	65.3%	472	251	-46.8%
	Natural Gas	-	-	-	-	-	-

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
	Fuel Oil	-	-	-	-	-	-
	Diesel	7,636	15,911	108.4%	563	1,142	102.9%
Energy Industries	LFG Combustion			-	-	-	-
Agriculture, Forestry And Fishing Activities	Diesel	23,423	27,932	19.3%	1,727	2,004	16.1%
Natural Gas Fugitive Emissions				-	-	-	-
<b>Total</b>		<b>1,065,755</b>	<b>706,061</b>	<b>-33.8%</b>	<b>45,653</b>	<b>14,529</b>	<b>-68.2%</b>
<b>On-Road Transportation</b>							
Electric Vehicles	Electricity	-	1	-	-	4	-
Hydrogen Vehicles	Hydrogen	-	-	-	-	-	-
Passenger Vehicles	Gasoline + Diesel	7,521	38,446	411.2%	511	2,510	391.1%
Light Trucks, Vans, SUVs	Gasoline + Diesel	119,903	129,711	8.2%	8,172	8,580	5.0%
Heavy Duty Vehicles	Gasoline + Diesel	76,282	36,338	-52.4%	5,177	2,381	-54.0%
Propane Vehicles	Propane	1,830	799	-56.4%	110	45	-58.9%
Natural Gas Vehicles	Natural Gas	-	-	-	-	-	-
Motorcycles	Gasoline	247	678	174.4%	17	44	157.1%
<b>Total On-Road Transportation</b>		<b>205,783</b>	<b>205,973</b>	<b>0.1%</b>	<b>13,987</b>	<b>13,564</b>	<b>-3.0%</b>
<b>Off-Road Transportation</b>							
Marine, Aviation and Other Off-Road Vehicles	Gasoline + Diesel + Jet Fuel	21,718	25,621	18.0%	1,608	1,893	17.7%
<b>Total Off-Road Transportation</b>		<b>21,718</b>	<b>25,621</b>	<b>18.0%</b>	<b>1,608</b>	<b>1,893</b>	<b>17.7%</b>
<b>Waste</b>							
Wastewater					0	0	74.2%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
Composting					0	240	-
Solid Waste					1,434	481	-66.4%
<b>Total Waste</b>					<b>1,434</b>	<b>722</b>	<b>-49.6%</b>
<b>Agriculture Forestry &amp; Other Land Use (AFOLU)</b>							
Land-Use: Emissions Sequestered (Disclosure Only - Not Included In Total)					-259,223	-255,713	-1.4%
Land-Use: Emissions Released (Disclosure Only - Not Included In Total)					31,481	706	-97.8%
Livestock, Aggregate Sources and Non-CO <sub>2</sub> Emission Sources on Land					18	16	-7.5%
<b>Total AFOLU</b>					<b>18</b>	<b>16</b>	<b>-7.5%</b>
<b>Industrial Process &amp; Product Use (IPPU)</b>							
Process Use Emissions					910	1,874	105.9%
<b>Total IPPU</b>					<b>910</b>	<b>1,874</b>	<b>105.9%</b>
<b>TOTAL</b>		<b>1,293,256</b>	<b>937,656</b>	<b>-27.5%</b>	<b>63,610</b>	<b>32,598</b>	<b>-48.8%</b>

# 9 CITY OF LANGFORD

## 9.1 2022 Profile

Profile	
Population	49,726
Dwellings	18,405
Registered Vehicles	34,972
Energy (Thousands of GJ)	4,139
GHG Emissions (tCO <sub>2</sub> e)	202,749

## 9.2 Energy & GHG Emissions

**Table 13** presents a summary comparison of the City of Langford's 2007 and 2022 energy and GHG emissions.

**Table 13. Estimated Energy and GHG Emissions By Reporting Source**

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
<b>Stationary Energy</b>							
Residential Buildings	Electricity	514,977	869,447	68.8%	5,107	2,777	-45.6%
	Natural Gas	122,432	282,797	131.0%	6,102	14,386	135.8%
	Fuel Oil	103,002	40,499	-60.7%	7,040	2,768	-60.7%
	Propane	17,793	17,568	-1.3%	1,082	1,072	-0.9%
	Wood	39,489	38,133	-3.4%	1,014	980	-3.4%
	Diesel	12,882	16,564	28.6%	950	1,189	25.2%
Commercial & Industrial Buildings	Electricity	343,772	418,410	21.7%	3,409	1,337	-60.8%
	Natural Gas	186,387	474,339	154.5%	9,290	24,130	159.7%



Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
	Fuel Oil	-	-	-	-	-	-
	Diesel	41,330	131,168	217.4%	3,047	9,413	209.0%
Energy Industries	LFG Combustion			-	-	-	-
Agriculture, Forestry And Fishing Activities	Diesel	126,780	230,263	81.6%	9,345	16,524	76.8%
Natural Gas Fugitive Emissions				-	81	191	137.1%
<b>Total</b>		<b>1,508,845</b>	<b>2,519,187</b>	<b>67.0%</b>	<b>46,467</b>	<b>74,765</b>	<b>60.9%</b>
<b>On-Road Transportation</b>							
Electric Vehicles	Electricity	-	6	-	-	20	-
Hydrogen Vehicles	Hydrogen	-	-	-	-	-	-
Passenger Vehicles	Gasoline + Diesel	364,717	347,442	-4.7%	24,540	22,654	-7.7%
Light Trucks, Vans, SUVs	Gasoline + Diesel	432,627	813,940	88.1%	29,475	53,765	82.4%
Heavy Duty Vehicles	Gasoline + Diesel	211,609	240,223	13.5%	14,287	15,776	10.4%
Propane Vehicles	Propane	3,348	1,888	-43.6%	202	107	-46.9%
Natural Gas Vehicles	Natural Gas	-	7	-	-	32	-
Motorcycles	Gasoline	3,488	5,366	53.8%	241	347	44.1%
<b>Total On-Road Transportation</b>		<b>1,015,791</b>	<b>1,408,873</b>	<b>38.7%</b>	<b>68,746</b>	<b>92,701</b>	<b>34.8%</b>
<b>Off-Road Transportation</b>							
Marine, Aviation and Other Off-Road Vehicles	Gasoline + Diesel + Jet Fuel	117,552	211,216	79.7%	8,705	15,606	79.3%
<b>Total Off-Road Transportation</b>		<b>117,552</b>	<b>211,216</b>	<b>79.7%</b>	<b>8,705</b>	<b>15,606</b>	<b>79.3%</b>
<b>Waste</b>							
Wastewater					621	435	-30.0%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
Composting					0	275	-
Solid Waste					7,761	3,969	-48.9%
<b>Total Waste</b>					<b>8,382</b>	<b>4,678</b>	<b>-44.2%</b>
<b>Agriculture Forestry &amp; Other Land Use (AFOLU)</b>							
Land-Use: Emissions Sequestered (Disclosure Only - Not Included In Total)					-6,609	-7,138	8.0%
Land-Use: Emissions Released (Disclosure Only - Not Included In Total)					6,886	8,316	20.8%
Livestock, Aggregate Sources and Non-CO <sub>2</sub> Emission Sources on Land					93	156	67.0%
<b>Total AFOLU</b>					<b>93</b>	<b>156</b>	<b>67.0%</b>
<b>Industrial Process &amp; Product Use (IPPU)</b>							
Process Use Emissions					4,926	14,843	201.3%
<b>Total IPPU</b>					<b>4,926</b>	<b>14,843</b>	<b>201.3%</b>
<b>TOTAL</b>		<b>2,642,187</b>	<b>4,139,276</b>	<b>56.7%</b>	<b>137,319</b>	<b>202,749</b>	<b>47.6%</b>

# 10 DISTRICT OF METCHOSIN

## 10.1 2022 Profile

Profile	
Population	5,523
Dwellings	2,083
Registered Vehicles	4,940
Energy (Thousands of GJ)	536
GHG Emissions (tCO <sub>2</sub> e)	26,425

## 10.2 Energy & GHG Emissions

**Table 14** presents a summary comparison of the District of Metchosin's 2007 and 2022 energy and GHG emissions.

**Table 14. Estimated Energy and GHG Emissions By Reporting Source**

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
<b>Stationary Energy</b>							
Residential Buildings	Electricity	136,893	128,782	-5.9%	1,358	411	-69.7%
	Natural Gas	8,173	11,258	37.8%	407	573	40.6%
	Fuel Oil	9,003	12,598	39.9%	615	861	39.9%
	Propane	1,553	1,534	-1.3%	94	94	-0.9%
	Wood	3,457	3,338	-3.4%	89	86	-3.4%
	Diesel	2,643	1,840	-30.4%	195	132	-32.2%
Commercial & Industrial Buildings	Electricity	38,037	58,579	54.0%	377	187	-50.4%
	Natural Gas	33,858	23,250	-31.3%	1,688	1,183	-29.9%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
	Fuel Oil	-	-	-	-	-	-
	Diesel	8,481	14,569	71.8%	625	1,045	67.2%
Energy Industries	LFG Combustion			-	-	-	-
Agriculture, Forestry And Fishing Activities	Diesel	26,016	25,575	-1.7%	1,918	1,835	-4.3%
Natural Gas Fugitive Emissions				-	4	4	14.6%
<b>Total</b>		<b>268,114</b>	<b>281,322</b>	<b>4.9%</b>	<b>7,370</b>	<b>6,412</b>	<b>-13.0%</b>
<b>On-Road Transportation</b>							
Electric Vehicles	Electricity	-	1	-	-	4	-
Hydrogen Vehicles	Hydrogen	-	-	-	-	-	-
Passenger Vehicles	Gasoline + Diesel	80,035	36,147	-54.8%	5,388	2,360	-56.2%
Light Trucks, Vans, SUVs	Gasoline + Diesel	110,966	144,179	29.9%	7,562	9,541	26.2%
Heavy Duty Vehicles	Gasoline + Diesel	40,483	50,060	23.7%	2,728	3,283	20.3%
Propane Vehicles	Propane	1,051	237	-77.5%	63	13	-78.8%
Natural Gas Vehicles	Natural Gas	-	-	-	-	-	-
Motorcycles	Gasoline	668	590	-11.7%	46	38	-17.3%
<b>Total On-Road Transportation</b>		<b>233,204</b>	<b>231,214</b>	<b>-0.9%</b>	<b>15,787</b>	<b>15,239</b>	<b>-3.5%</b>
<b>Off-Road Transportation</b>							
Marine, Aviation and Other Off-Road Vehicles	Gasoline + Diesel + Jet Fuel	24,123	23,459	-2.7%	1,786	1,733	-3.0%
<b>Total Off-Road Transportation</b>		<b>24,123</b>	<b>23,459</b>	<b>-2.7%</b>	<b>1,786</b>	<b>1,733</b>	<b>-3.0%</b>
<b>Waste</b>							
Wastewater					0	0	-

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
Composting					0	4	-
Solid Waste					1,593	441	-72.3%
<b>Total Waste</b>					<b>1,593</b>	<b>445</b>	<b>-72.0%</b>
<b>Agriculture Forestry &amp; Other Land Use (AFOLU)</b>							
Land-Use: Emissions Sequestered (Disclosure Only - Not Included In Total)					-12,139	-13,009	7.2%
Land-Use: Emissions Released (Disclosure Only - Not Included In Total)					4,011	4,030	0.5%
Livestock, Aggregate Sources and Non-CO <sub>2</sub> Emission Sources on Land					618	880	42.4%
<b>Total AFOLU</b>					<b>618</b>	<b>880</b>	<b>42.4%</b>
<b>Industrial Process &amp; Product Use (IPPU)</b>							
Process Use Emissions					1,011	1,716	69.8%
<b>Total IPPU</b>					<b>1,011</b>	<b>1,716</b>	<b>69.8%</b>
<b>TOTAL</b>		<b>525,440</b>	<b>535,995</b>	<b>2.0%</b>	<b>28,165</b>	<b>26,425</b>	<b>-6.2%</b>

# 11 DISTRICT OF NORTH SAANICH

## 11.1 2022 Profile

Profile	
Population	13,052
Dwellings	5,195
Registered Vehicles	11,310
Energy (Thousands of GJ)	1,437
GHG Emissions (tCO <sub>2</sub> e)	63,971

## 11.2 Energy & GHG Emissions

**Table 15** presents a summary comparison of the District of North Saanich's 2007 and 2022 energy and GHG emissions.

**Table 15. Estimated Energy and GHG Emissions By Reporting Source**

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
<b>Stationary Energy</b>							
Residential Buildings	Electricity	375,413	364,490	-2.9%	3,723	1,164	-68.7%
	Natural Gas	41,591	91,354	119.6%	2,073	4,647	124.2%
	Fuel Oil	5,953	16,285	173.6%	407	1,113	173.6%
	Propane	1,027	1,014	-1.3%	62	62	-0.9%
	Wood	2,286	2,208	-3.4%	59	57	-3.4%
	Diesel	5,806	4,348	-25.1%	428	312	-27.1%
Commercial & Industrial Buildings	Electricity	156,437	202,840	29.7%	1,551	648	-58.2%
	Natural Gas	99,927	127,891	28.0%	4,980	6,506	30.6%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
	Fuel Oil	-	-	-	-	-	-
	Diesel	18,627	34,429	84.8%	1,373	2,471	79.9%
Energy Industries	LFG Combustion			-	-	-	-
Agriculture, Forestry And Fishing Activities	Diesel	57,138	60,439	5.8%	4,212	4,337	3.0%
Natural Gas Fugitive Emissions				-	21	41	96.2%
<b>Total</b>		<b>764,204</b>	<b>905,298</b>	<b>18.5%</b>	<b>18,889</b>	<b>21,358</b>	<b>13.1%</b>
<b>On-Road Transportation</b>							
Electric Vehicles	Electricity	-	4	-	-	12	-
Hydrogen Vehicles	Hydrogen	-	-	-	-	-	-
Passenger Vehicles	Gasoline + Diesel	208,096	99,382	-52.2%	14,009	6,486	-53.7%
Light Trucks, Vans, SUVs	Gasoline + Diesel	227,960	295,735	29.7%	15,531	19,553	25.9%
Heavy Duty Vehicles	Gasoline + Diesel	90,034	78,160	-13.2%	6,040	5,121	-15.2%
Propane Vehicles	Propane	1,012	715	-29.4%	61	41	-33.6%
Natural Gas Vehicles	Natural Gas	-	0	-	-	1	-
Motorcycles	Gasoline	1,684	1,798	6.8%	116	116	0.0%
<b>Total On-Road Transportation</b>		<b>528,786</b>	<b>475,793</b>	<b>-10.0%</b>	<b>35,757</b>	<b>31,330</b>	<b>-12.4%</b>
<b>Off-Road Transportation</b>							
Marine, Aviation and Other Off-Road Vehicles	Gasoline + Diesel + Jet Fuel	52,979	55,440	4.6%	3,923	4,096	4.4%
<b>Total Off-Road Transportation</b>		<b>52,979</b>	<b>55,440</b>	<b>4.6%</b>	<b>3,923</b>	<b>4,096</b>	<b>4.4%</b>
<b>Waste</b>							
Wastewater					196	75	-61.9%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
Composting					0	30	-
Solid Waste					3,498	1,042	-70.2%
<b>Total Waste</b>					<b>3,694</b>	<b>1,147</b>	<b>-69.0%</b>
<b>Agriculture Forestry &amp; Other Land Use (AFOLU)</b>							
Land-Use: Emissions Sequestered (Disclosure Only - Not Included In Total)					-5,055	-5,121	1.3%
Land-Use: Emissions Released (Disclosure Only - Not Included In Total)					4,758	5,160	8.5%
Livestock, Aggregate Sources and Non-CO <sub>2</sub> Emission Sources on Land					1,335	2,022	51.4%
<b>Total AFOLU</b>					<b>1,335</b>	<b>2,022</b>	<b>51.4%</b>
<b>Industrial Process &amp; Product Use (IPPU)</b>							
Process Use Emissions					2,220	4,017	81.0%
<b>Total IPPU</b>					<b>2,220</b>	<b>4,017</b>	<b>81.0%</b>
<b>TOTAL</b>		<b>1,345,969</b>	<b>1,436,531</b>	<b>6.7%</b>	<b>65,819</b>	<b>63,971</b>	<b>-2.8%</b>



# 12 DISTRICT OF OAK BAY

## 12.1 2022 Profile

Profile	
Population	19,592
Dwellings	8,059
Registered Vehicles	12,101
Energy (Thousands of GJ)	1,520
GHG Emissions (tCO <sub>2</sub> e)	74,984

## 12.2 Energy & GHG Emissions

**Table 16** presents a summary comparison of the District of Oak Bay's 2007 and 2022 energy and GHG emissions.

**Table 16. Estimated Energy and GHG Emissions By Reporting Source**

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
<b>Stationary Energy</b>							
Residential Buildings	Electricity	370,574	346,497	-6.5%	3,675	1,107	-69.9%
	Natural Gas	276,642	313,923	13.5%	13,788	15,969	15.8%
	Fuel Oil	66,466	41,113	-38.1%	4,543	2,810	-38.1%
	Propane	11,487	11,341	-1.3%	699	692	-0.9%
	Wood	25,469	24,594	-3.4%	654	632	-3.4%
	Diesel	9,649	6,526	-32.4%	711	468	-34.2%
Commercial & Industrial Buildings	Electricity	106,747	78,134	-26.8%	1,059	250	-76.4%
	Natural Gas	83,140	131,482	58.1%	4,144	6,689	61.4%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
	Fuel Oil	-	-	-	-	-	-
	Diesel	30,957	51,680	66.9%	2,282	3,709	62.5%
Energy Industries	LFG Combustion			-	-	-	-
Agriculture, Forestry And Fishing Activities	Diesel	-	-	-	-	-	-
Natural Gas Fugitive Emissions				-	83	114	37.3%
<b>Total</b>		<b>981,129</b>	<b>1,005,291</b>	<b>2.5%</b>	<b>31,637</b>	<b>32,439</b>	<b>2.5%</b>
<b>On-Road Transportation</b>							
Electric Vehicles	Electricity	-	4	-	-	14	-
Hydrogen Vehicles	Hydrogen	-	-	-	-	-	-
Passenger Vehicles	Gasoline + Diesel	322,115	131,858	-59.1%	21,677	8,597	-60.3%
Light Trucks, Vans, SUVs	Gasoline + Diesel	199,128	253,538	27.3%	13,563	16,737	23.4%
Heavy Duty Vehicles	Gasoline + Diesel	78,292	44,175	-43.6%	5,265	2,870	-45.5%
Propane Vehicles	Propane	857	207	-75.8%	52	12	-77.2%
Natural Gas Vehicles	Natural Gas	-	0	-	-	1	-
Motorcycles	Gasoline	1,771	1,730	-2.3%	122	112	-8.5%
<b>Total On-Road Transportation</b>		<b>602,163</b>	<b>431,512</b>	<b>-28.3%</b>	<b>40,679</b>	<b>28,343</b>	<b>-30.3%</b>
<b>Off-Road Transportation</b>							
Marine, Aviation and Other Off-Road Vehicles	Gasoline + Diesel + Jet Fuel	88,048	83,219	-5.5%	6,520	6,149	-5.7%
<b>Total Off-Road Transportation</b>		<b>88,048</b>	<b>83,219</b>	<b>-5.5%</b>	<b>6,520</b>	<b>6,149</b>	<b>-5.7%</b>
<b>Waste</b>							
Wastewater					1,968	399	-79.7%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
Composting					0	1	-
Solid Waste					5,813	1,564	-73.1%
<b>Total Waste</b>					<b>7,782</b>	<b>1,964</b>	<b>-74.8%</b>
<b>Agriculture Forestry &amp; Other Land Use (AFOLU)</b>							
Land-Use: Emissions Sequestered (Disclosure Only - Not Included In Total)					-1,461	-1,871	28.0%
Land-Use: Emissions Released (Disclosure Only - Not Included In Total)					1,731	1,898	9.6%
Livestock, Aggregate Sources and Non-CO <sub>2</sub> Emission Sources on Land					0	0	133.0%
<b>Total AFOLU</b>					<b>0</b>	<b>0</b>	<b>133.0%</b>
<b>Industrial Process &amp; Product Use (IPPU)</b>							
Process Use Emissions					3,690	6,089	65.0%
<b>Total IPPU</b>					<b>3,690</b>	<b>6,089</b>	<b>65.0%</b>
<b>TOTAL</b>		<b>1,671,340</b>	<b>1,520,022</b>	<b>-9.1%</b>	<b>90,308</b>	<b>74,984</b>	<b>-17.0%</b>

# 13 THE DISTRICT OF SAANICH

## 13.1 2022 Profile

Profile	
Population	126,234
Dwellings	50,443
Registered Vehicles	82,995
Energy (Thousands of GJ)	10,288
GHG Emissions (tCO <sub>2</sub> e)	507,791

## 13.2 Energy & GHG Emissions

**Table 17** presents a summary comparison of the District of Saanich's 2007 and 2022 energy and GHG emissions.

**Table 17. Estimated Energy and GHG Emissions By Reporting Source**

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
<b>Stationary Energy</b>							
Residential Buildings	Electricity	2,358,702	2,261,336	-4.1%	23,391	7,224	-69.1%
	Natural Gas	743,960	917,866	23.4%	37,079	46,692	25.9%
	Fuel Oil	518,953	245,284	-52.7%	35,471	16,766	-52.7%
	Propane	97,519	96,737	-0.8%	5,931	5,902	-0.5%
	Wood	216,161	211,769	-2.0%	5,553	5,440	-2.0%
	Diesel	57,644	42,049	-27.1%	4,249	3,017	-29.0%
Commercial & Industrial Buildings	Electricity	1,176,089	1,043,614	-11.3%	11,663	3,334	-71.4%
	Natural Gas	759,454	894,838	17.8%	37,852	45,521	20.3%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
	Fuel Oil	38,936	20,302	-47.9%	2,661	1,388	-47.9%
	Diesel	184,944	332,982	80.0%	13,633	23,895	75.3%
Energy Industries	LFG Combustion			-	418	6,497	1454.3%
Agriculture, Forestry And Fishing Activities	Diesel	567,313	584,544	3.0%	41,818	41,947	0.3%
Natural Gas Fugitive Emissions				-	314	462	47.0%
<b>Total</b>		<b>6,719,676</b>	<b>6,651,319</b>	<b>-1.0%</b>	<b>220,033</b>	<b>208,084</b>	<b>-5.4%</b>
<b>On-Road Transportation</b>							
Electric Vehicles	Electricity	-	15	-	-	46	-
Hydrogen Vehicles	Hydrogen	-	-	-	-	-	-
Passenger Vehicles	Gasoline + Diesel	1,877,530	776,827	-58.6%	126,328	50,639	-59.9%
Light Trucks, Vans, SUVs	Gasoline + Diesel	1,549,388	1,973,500	27.4%	105,548	130,220	23.4%
Heavy Duty Vehicles	Gasoline + Diesel	564,100	329,218	-41.6%	37,966	21,579	-43.2%
Propane Vehicles	Propane	8,605	3,199	-62.8%	519	182	-65.0%
Natural Gas Vehicles	Natural Gas	-	1	-	-	3	-
Motorcycles	Gasoline	11,374	17,812	56.6%	785	1,152	46.7%
<b>Total On-Road Transportation</b>		<b>4,010,996</b>	<b>3,100,571</b>	<b>-22.7%</b>	<b>271,147</b>	<b>203,821</b>	<b>-24.8%</b>
<b>Off-Road Transportation</b>							
Marine, Aviation and Other Off-Road Vehicles	Gasoline + Diesel + Jet Fuel	526,020	536,191	1.9%	38,951	39,618	1.7%
<b>Total Off-Road Transportation</b>		<b>526,020</b>	<b>536,191</b>	<b>1.9%</b>	<b>38,951</b>	<b>39,618</b>	<b>1.7%</b>
<b>Waste</b>							
Wastewater					4,989	1,337	-73.2%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
Composting					0	3,468	-
Solid Waste					34,731	10,076	-71.0%
<b>Total Waste</b>					<b>39,720</b>	<b>14,881</b>	<b>-62.5%</b>
<b>Agriculture Forestry &amp; Other Land Use (AFOLU)</b>							
Land-Use: Emissions Sequestered (Disclosure Only - Not Included In Total)					-15,421	-17,123	11.0%
Land-Use: Emissions Released (Disclosure Only - Not Included In Total)					22,453	13,619	-39.3%
Livestock, Aggregate Sources and Non-CO <sub>2</sub> Emission Sources on Land					1,465	1,883	28.5%
<b>Total AFOLU</b>					<b>1,465</b>	<b>1,883</b>	<b>28.5%</b>
<b>Industrial Process &amp; Product Use (IPPU)</b>							
Process Use Emissions					22,042	39,504	79.2%
<b>Total IPPU</b>					<b>22,042</b>	<b>39,504</b>	<b>79.2%</b>
<b>TOTAL</b>		<b>11,256,692</b>	<b>10,288,081</b>	<b>-8.6%</b>	<b>593,359</b>	<b>507,791</b>	<b>-14.4%</b>

# 14 SALT SPRING ELECTORAL AREA

## 14.1 2022 Profile

Profile	
Population	12,209
Dwellings	5,270
Registered Vehicles	10,174
Energy (Thousands of GJ)	1,182
GHG Emissions (tCO <sub>2</sub> e)	50,992

## 14.2 Energy & GHG Emissions

**Table 18** presents a summary comparison of Salt Spring Island Electoral Area's 2007 and 2022 energy and GHG emissions.

**Table 18. Estimated Energy and GHG Emissions By Reporting Source**

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
<b>Stationary Energy</b>							
	Electricity	360,697	385,852	7.0%	3,577	1,233	-65.5%
	Natural Gas	-	-	-	-	-	-
Residential Buildings	Fuel Oil	9,967	7,006	-29.7%	681	479	-29.7%
	Propane	9,006	9,167	1.8%	548	559	2.1%
	Wood	75,133	74,798	-0.4%	1,930	1,921	-0.4%
	Diesel	5,252	4,067	-22.6%	387	292	-24.6%
	Commercial & Industrial Buildings	Electricity	91,954	126,373	37.4%	912	404
	Natural Gas	-	-	-	-	-	-

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
	Fuel Oil	-	-	-	-	-	-
	Diesel	16,851	32,205	91.1%	1,242	2,311	86.1%
Energy Industries	LFG Combustion			-	-	-	-
Agriculture, Forestry And Fishing Activities	Diesel	51,691	56,535	9.4%	3,810	4,057	6.5%
Natural Gas Fugitive Emissions				-	-	-	-
<b>Total</b>		<b>620,552</b>	<b>696,003</b>	<b>12.2%</b>	<b>13,087</b>	<b>11,256</b>	<b>-14.0%</b>
<b>On-Road Transportation</b>							
Electric Vehicles	Electricity	-	4	-	-	11	-
Hydrogen Vehicles	Hydrogen	-	-	-	-	-	-
Passenger Vehicles	Gasoline + Diesel	166,502	75,332	-54.8%	11,207	4,915	-56.1%
Light Trucks, Vans, SUVs	Gasoline + Diesel	191,257	271,076	41.7%	13,028	17,912	37.5%
Heavy Duty Vehicles	Gasoline + Diesel	50,460	84,654	67.8%	3,350	5,529	65.0%
Propane Vehicles	Propane	857	1,356	58.3%	52	77	48.9%
Natural Gas Vehicles	Natural Gas	-	-	-	-	-	-
Motorcycles	Gasoline	1,737	1,330	-23.5%	120	86	-28.3%
<b>Total On-Road Transportation</b>		<b>410,814</b>	<b>433,750</b>	<b>5.6%</b>	<b>27,758</b>	<b>28,531</b>	<b>2.8%</b>
<b>Off-Road Transportation</b>							
Marine, Aviation and Other Off-Road Vehicles	Gasoline + Diesel + Jet Fuel	47,929	51,859	8.2%	3,549	3,832	8.0%
<b>Total Off-Road Transportation</b>		<b>47,929</b>	<b>51,859</b>	<b>8.2%</b>	<b>3,549</b>	<b>3,832</b>	<b>8.0%</b>
<b>Waste</b>							
Wastewater					49	9	-81.3%



Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
Composting					0	0	-
Solid Waste					3,165	975	-69.2%
<b>Total Waste</b>					<b>3,213</b>	<b>984</b>	<b>-69.4%</b>
<b>Agriculture Forestry &amp; Other Land Use (AFOLU)</b>							
Land-Use: Emissions Sequestered (Disclosure Only - Not Included In Total)					-33,060	-34,295	3.7%
Land-Use: Emissions Released (Disclosure Only - Not Included In Total)					32,083	12,143	-62.2%
Livestock, Aggregate Sources and Non-CO <sub>2</sub> Emission Sources on Land					407	2,563	529.2%
<b>Total AFOLU</b>					<b>407</b>	<b>2,563</b>	<b>529.2%</b>
<b>Industrial Process &amp; Product Use (IPPU)</b>							
Process Use Emissions					2,008	3,827	90.5%
<b>Total IPPU</b>					<b>2,008</b>	<b>3,827</b>	<b>90.5%</b>
<b>TOTAL</b>		<b>1,079,295</b>	<b>1,181,612</b>	<b>9.5%</b>	<b>50,023</b>	<b>50,992</b>	<b>1.9%</b>

# 15 TOWN OF SIDNEY

## 15.1 2022 Profile

Profile	
Population	12,950
Dwellings	6,349
Registered Vehicles	9,582
Energy (Thousands of GJ)	1,196
GHG Emissions (tCO <sub>2</sub> e)	55,426

## 15.2 Energy & GHG Emissions

**Table 19** presents a summary comparison of the Town Sidney's 2007 and 2022 energy and GHG emissions.

**Table 19. Estimated Energy and GHG Emissions By Reporting Source**

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
<b>Stationary Energy</b>							
Residential Buildings	Electricity	242,453	247,660	2.1%	2,404	791	-67.1%
	Natural Gas	70,155	96,432	37.5%	3,497	4,906	40.3%
	Fuel Oil	58,189	9,648	-83.4%	3,977	659	-83.4%
	Propane	10,069	9,942	-1.3%	612	607	-0.9%
	Wood	22,263	21,499	-3.4%	572	552	-3.4%
	Diesel	6,040	4,314	-28.6%	445	310	-30.5%
Commercial & Industrial Buildings	Electricity	187,401	165,750	-11.6%	1,858	529	-71.5%
	Natural Gas	80,240	106,080	32.2%	3,999	5,396	34.9%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
	Fuel Oil	-	-	-	-	-	-
	Diesel	19,378	34,160	76.3%	1,428	2,451	71.6%
Energy Industries	LFG Combustion			-	-	-	-
Agriculture, Forestry And Fishing Activities	Diesel	59,441	59,967	0.9%	4,382	4,303	-1.8%
Natural Gas Fugitive Emissions				-	47	71	48.8%
<b>Total</b>		<b>755,630</b>	<b>755,451</b>	<b>0.0%</b>	<b>23,223</b>	<b>20,576</b>	<b>-11.4%</b>
<b>On-Road Transportation</b>							
Electric Vehicles	Electricity	-	2	-	-	6	-
Hydrogen Vehicles	Hydrogen	-	-	-	-	-	-
Passenger Vehicles	Gasoline + Diesel	199,863	102,924	-48.5%	13,448	6,710	-50.1%
Light Trucks, Vans, SUVs	Gasoline + Diesel	162,604	211,267	29.9%	11,077	13,952	26.0%
Heavy Duty Vehicles	Gasoline + Diesel	82,673	69,148	-16.4%	5,563	4,523	-18.7%
Propane Vehicles	Propane	973	557	-42.8%	59	32	-46.2%
Natural Gas Vehicles	Natural Gas	-	0	-	-	0	-
Motorcycles	Gasoline	1,276	1,547	21.2%	88	100	13.5%
<b>Total On-Road Transportation</b>		<b>447,389</b>	<b>385,444</b>	<b>-13.8%</b>	<b>30,234</b>	<b>25,323</b>	<b>-16.2%</b>
<b>Off-Road Transportation</b>							
Marine, Aviation and Other Off-Road Vehicles	Gasoline + Diesel + Jet Fuel	55,114	55,006	-0.2%	4,081	4,064	-0.4%
<b>Total Off-Road Transportation</b>		<b>55,114</b>	<b>55,006</b>	<b>-0.2%</b>	<b>4,081</b>	<b>4,064</b>	<b>-0.4%</b>
<b>Waste</b>							
Wastewater					612	175	-71.4%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
Composting					0	201	-
Solid Waste					3,639	1,034	-71.6%
<b>Total Waste</b>					<b>4,251</b>	<b>1,410</b>	<b>-66.8%</b>
<b>Agriculture Forestry &amp; Other Land Use (AFOLU)</b>							
Land-Use: Emissions Sequestered (Disclosure Only - Not Included In Total)					-543	-506	-6.8%
Land-Use: Emissions Released (Disclosure Only - Not Included In Total)					823	1,251	52.1%
Livestock, Aggregate Sources and Non-CO <sub>2</sub> Emission Sources on Land					4	87	1915.6%
<b>Total AFOLU</b>					<b>4</b>	<b>87</b>	<b>1915.6%</b>
<b>Industrial Process &amp; Product Use (IPPU)</b>							
Process Use Emissions					2,310	3,967	71.7%
<b>Total IPPU</b>					<b>2,310</b>	<b>3,967</b>	<b>71.7%</b>
<b>TOTAL</b>		<b>1,258,133</b>	<b>1,195,902</b>	<b>-4.9%</b>	<b>64,104</b>	<b>55,426</b>	<b>-13.5%</b>

# 16 DISTRICT OF SOOKE

## 16.1 2022 Profile

Profile	
Population	16,372
Dwellings	6,379
Registered Vehicles	12,589
Energy (Thousands of GJ)	1,302
GHG Emissions (tCO <sub>2</sub> e)	64,405

## 16.2 Energy & GHG Emissions

**Table 20** presents a summary comparison of the District of Sooke's 2007 and 2022 energy and GHG emissions.

**Table 20. Estimated Energy and GHG Emissions By Reporting Source**

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
<b>Stationary Energy</b>							
Residential Buildings	Electricity	257,364	343,855	33.6%	2,552	1,098	-57.0%
	Natural Gas	13,108	70,631	438.8%	653	3,593	450.0%
	Fuel Oil	56,455	9,956	-82.4%	3,859	680	-82.4%
	Propane	9,744	9,620	-1.3%	593	587	-0.9%
	Wood	21,667	20,923	-3.4%	557	537	-3.4%
	Diesel	5,454	5,454	0.0%	402	391	-2.7%
Commercial & Industrial Buildings	Electricity	68,790	87,332	27.0%	682	279	-59.1%
	Natural Gas	16,506	35,468	114.9%	823	1,804	119.3%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
	Fuel Oil	-	-	-	-	-	-
	Diesel	17,499	43,186	146.8%	1,290	3,099	140.3%
Energy Industries	LFG Combustion			-	-	-	-
Agriculture, Forestry And Fishing Activities	Diesel	53,678	75,813	41.2%	3,957	5,440	37.5%
Natural Gas Fugitive Emissions				-	13	53	314.1%
<b>Total</b>		<b>520,266</b>	<b>702,237</b>	<b>35.0%</b>	<b>15,380</b>	<b>17,564</b>	<b>14.2%</b>
<b>On-Road Transportation</b>							
Electric Vehicles	Electricity	-	3	-	-	9	-
Hydrogen Vehicles	Hydrogen	-	-	-	-	-	-
Passenger Vehicles	Gasoline + Diesel	141,887	113,978	-19.7%	9,552	7,437	-22.1%
Light Trucks, Vans, SUVs	Gasoline + Diesel	187,290	324,163	73.1%	12,761	21,428	67.9%
Heavy Duty Vehicles	Gasoline + Diesel	80,655	89,791	11.3%	5,440	5,874	8.0%
Propane Vehicles	Propane	1,986	286	-85.6%	120	16	-86.4%
Natural Gas Vehicles	Natural Gas	-	0	-	-	1	-
Motorcycles	Gasoline	1,490	2,001	34.3%	103	129	25.8%
<b>Total On-Road Transportation</b>		<b>413,309</b>	<b>530,222</b>	<b>28.3%</b>	<b>27,976</b>	<b>34,895</b>	<b>24.7%</b>
<b>Off-Road Transportation</b>							
Marine, Aviation and Other Off-Road Vehicles	Gasoline + Diesel + Jet Fuel	49,771	69,542	39.7%	3,686	5,138	39.4%
<b>Total Off-Road Transportation</b>		<b>49,771</b>	<b>69,542</b>	<b>39.7%</b>	<b>3,686</b>	<b>5,138</b>	<b>39.4%</b>
<b>Waste</b>							
Wastewater					0	0	-

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2e</sub> )	2022 GHG Emissions (tCO <sub>2e</sub> )	Change (%)
Composting					0	41	-
Solid Waste					3,286	1,307	-60.2%
<b>Total Waste</b>					<b>3,286</b>	<b>1,348</b>	<b>-59.0%</b>
<b>Agriculture Forestry &amp; Other Land Use (AFOLU)</b>							
Land-Use: Emissions Sequestered (Disclosure Only - Not Included In Total)					-9,952	-11,266	13.2%
Land-Use: Emissions Released (Disclosure Only - Not Included In Total)					6,213	5,442	-12.4%
Livestock, Aggregate Sources and Non-CO <sub>2</sub> Emission Sources on Land					126	517	309.5%
<b>Total AFOLU</b>					<b>126</b>	<b>517</b>	<b>309.5%</b>
<b>Industrial Process &amp; Product Use (IPPU)</b>							
Process Use Emissions					2,086	4,943	137.0%
<b>Total IPPU</b>					<b>2,086</b>	<b>4,943</b>	<b>137.0%</b>
<b>TOTAL</b>		<b>983,346</b>	<b>1,302,000</b>	<b>32.4%</b>	<b>52,539</b>	<b>64,405</b>	<b>22.6%</b>

# 17 CITY OF VICTORIA

## 17.1 2022 Profile

Profile	
Population	96,771
Dwellings	53,590
Registered Vehicles	54,547
Energy (Thousands of GJ)	9,194
GHG Emissions (tCO <sub>2</sub> e)	407,082

## 17.2 Energy & GHG Emissions

**Table 21** presents a summary comparison of the City of Victoria's 2007 and 2022 energy and GHG emissions.

**Table 21. Estimated Energy and GHG Emissions By Reporting Source**

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
<b>Stationary Energy</b>							
Residential Buildings	Electricity	1,235,156	1,440,845	16.7%	12,249	4,603	-62.4%
	Natural Gas	952,641	477,565	-49.9%	47,480	24,294	-48.8%
	Fuel Oil	617,245	101,625	-83.5%	42,190	6,946	-83.5%
	Propane	118,617	117,666	-0.8%	7,214	7,179	-0.5%
	Wood	259,255	257,078	-0.8%	6,660	6,604	-0.8%
	Diesel	42,018	32,235	-23.3%	3,097	2,313	-25.3%
Commercial & Industrial Buildings	Electricity	1,983,621	1,791,569	-9.7%	19,671	5,723	-70.9%
	Natural Gas	1,377,709	2,026,818	47.1%	68,666	103,105	50.2%



Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
	Fuel Oil	122,702	122,702	0.0%	8,387	8,387	0.0%
	Diesel	134,809	255,264	89.4%	9,937	18,318	84.3%
Energy Industries	LFG Combustion			-	-	-	-
Agriculture, Forestry And Fishing Activities	Diesel	-	-	-	-	-	-
Natural Gas Fugitive Emissions				-	240	272	13.0%
<b>Total</b>		<b>6,843,772</b>	<b>6,623,367</b>	<b>-3.2%</b>	<b>225,791</b>	<b>187,744</b>	<b>-16.9%</b>
<b>On-Road Transportation</b>							
Electric Vehicles	Electricity	-	9	-	-	29	-
Hydrogen Vehicles	Hydrogen	-	-	-	-	-	-
Passenger Vehicles	Gasoline + Diesel	1,250,314	462,162	-63.0%	84,131	30,110	-64.2%
Light Trucks, Vans, SUVs	Gasoline + Diesel	774,818	1,120,119	44.6%	52,783	73,864	39.9%
Heavy Duty Vehicles	Gasoline + Diesel	467,779	293,864	-37.2%	31,539	19,210	-39.1%
Propane Vehicles	Propane	5,840	2,667	-54.3%	352	151	-57.0%
Natural Gas Vehicles	Natural Gas	-	0	-	-	2	-
Motorcycles	Gasoline	8,968	5,902	-34.2%	619	382	-38.3%
<b>Total On-Road Transportation</b>		<b>2,507,720</b>	<b>1,884,723</b>	<b>-24.8%</b>	<b>169,424</b>	<b>123,748</b>	<b>-27.0%</b>
<b>Off-Road Transportation</b>							
Marine, Aviation and Other Off-Road Vehicles	Gasoline + Diesel + Jet Fuel	524,642	685,904	30.7%	38,899	50,820	30.6%
<b>Total Off-Road Transportation</b>		<b>524,642</b>	<b>685,904</b>	<b>30.7%</b>	<b>38,899</b>	<b>50,820</b>	<b>30.6%</b>
<b>Waste</b>							
Wastewater					7,699	1,735	-77.5%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
Composting					73	902	1133.5%
Solid Waste					25,316	12,307	-51.4%
<b>Total Waste</b>					<b>33,088</b>	<b>14,944</b>	<b>-54.8%</b>
<b>Agriculture Forestry &amp; Other Land Use (AFOLU)</b>							
Land-Use: Emissions Sequestered (Disclosure Only - Not Included In Total)					-1,798	-1,939	7.8%
Land-Use: Emissions Released (Disclosure Only - Not Included In Total)					3,725	3,744	0.5%
Livestock, Aggregate Sources and Non-CO <sub>2</sub> Emission Sources on Land					0	0	-
<b>Total AFOLU</b>					<b>0</b>	<b>0</b>	<b>-</b>
<b>Industrial Process &amp; Product Use (IPPU)</b>							
Process Use Emissions					16,067	29,825	85.6%
<b>Total IPPU</b>					<b>16,067</b>	<b>29,825</b>	<b>85.6%</b>
<b>TOTAL</b>		<b>9,876,133</b>	<b>9,193,993</b>	<b>-6.9%</b>	<b>483,269</b>	<b>407,082</b>	<b>-15.8%</b>

# 18 TOWN OF VIEW ROYAL

## 18.1 2022 Profile

Profile	
Population	12,987
Dwellings	5,115
Registered Vehicles	8,417
Energy (Thousands of GJ)	1,070
GHG Emissions (tCO <sub>2</sub> e)	51,486

## 18.2 Energy & GHG Emissions

**Table 22** presents a summary comparison of the Town of View Royal's 2007 and 2022 energy and GHG emissions.

**Table 22. Estimated Energy and GHG Emissions By Reporting Source**

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
<b>Stationary Energy</b>							
Residential Buildings	Electricity	185,833	214,630	15.5%	1,843	686	-62.8%
	Natural Gas	75,155	92,417	23.0%	3,746	4,701	25.5%
	Fuel Oil	22,724	4,855	-78.6%	1,553	332	-78.6%
	Propane	3,926	3,876	-1.3%	239	237	-0.9%
	Wood	8,710	8,411	-3.4%	224	216	-3.4%
	Diesel	4,806	4,326	-10.0%	354	310	-12.4%
Commercial & Industrial Buildings	Electricity	113,772	121,413	6.7%	1,128	388	-65.6%
	Natural Gas	123,868	156,425	26.3%	6,174	7,957	28.9%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
	Fuel Oil	-	-	-	-	-	-
	Diesel	15,419	34,257	122.2%	1,137	2,458	116.3%
Energy Industries	LFG Combustion			-	-	-	-
Agriculture, Forestry And Fishing Activities	Diesel	47,299	60,138	27.1%	3,487	4,315	23.8%
Natural Gas Fugitive Emissions				-	38	52	36.7%
<b>Total</b>		<b>601,514</b>	<b>700,749</b>	<b>16.5%</b>	<b>19,922</b>	<b>21,653</b>	<b>8.7%</b>
<b>On-Road Transportation</b>							
Electric Vehicles	Electricity	-	2	-	-	6	-
Hydrogen Vehicles	Hydrogen	-	-	-	-	-	-
Passenger Vehicles	Gasoline + Diesel	138,335	87,713	-36.6%	9,308	5,719	-38.6%
Light Trucks, Vans, SUVs	Gasoline + Diesel	135,581	188,803	39.3%	9,236	12,468	35.0%
Heavy Duty Vehicles	Gasoline + Diesel	61,064	35,124	-42.5%	4,112	2,290	-44.3%
Propane Vehicles	Propane	895	606	-32.3%	54	34	-36.3%
Natural Gas Vehicles	Natural Gas	-	-	-	-	-	-
Motorcycles	Gasoline	1,223	1,391	13.7%	84	90	6.5%
<b>Total On-Road Transportation</b>		<b>337,099</b>	<b>313,639</b>	<b>-7.0%</b>	<b>22,795</b>	<b>20,608</b>	<b>-9.6%</b>
<b>Off-Road Transportation</b>							
Marine, Aviation and Other Off-Road Vehicles	Gasoline + Diesel + Jet Fuel	43,856	55,164	25.8%	3,248	4,076	25.5%
<b>Total Off-Road Transportation</b>		<b>43,856</b>	<b>55,164</b>	<b>25.8%</b>	<b>3,248</b>	<b>4,076</b>	<b>25.5%</b>
<b>Waste</b>							
Wastewater					386	107	-72.4%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
Composting					0	88	-
Solid Waste					2,896	1,037	-64.2%
<b>Total Waste</b>					<b>3,282</b>	<b>1,232</b>	<b>-62.5%</b>
<b>Agriculture Forestry &amp; Other Land Use (AFOLU)</b>							
Land-Use: Emissions Sequestered (Disclosure Only - Not Included In Total)					-2,585	-2,740	6.0%
Land-Use: Emissions Released (Disclosure Only - Not Included In Total)					1,738	1,807	4.0%
Livestock, Aggregate Sources and Non-CO <sub>2</sub> Emission Sources on Land					4	22	502.5%
<b>Total AFOLU</b>					<b>4</b>	<b>22</b>	<b>502.5%</b>
<b>Industrial Process &amp; Product Use (IPPU)</b>							
Process Use Emissions					1,838	3,895	112.0%
<b>Total IPPU</b>					<b>1,838</b>	<b>3,895</b>	<b>112.0%</b>
<b>TOTAL</b>		<b>982,469</b>	<b>1,069,552</b>	<b>8.9%</b>	<b>51,087</b>	<b>51,486</b>	<b>0.8%</b>

# 19 SOUTHERN GULF ISLANDS ELECTORAL AREA

## 19.1 2022 Profile

The Southern Gulf Islands Electoral Area consists of: Galiano, Mayne, North Pender, Saturna and South Pender.

Profile	
Population	5,769
Dwellings	2,323
Registered Vehicles	5,105
Energy (Thousands of GJ)	848
GHG Emissions (tCO <sub>2</sub> e)	35,335

## 19.2 Energy & GHG Emissions

**Table 23** presents a summary comparison of the Southern Gulf Islands Electoral Area 2007 and 2022 energy and GHG emissions.

**Table 23. Estimated Energy and GHG Emissions By Reporting Source**

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
<b>Stationary Energy</b>							
	Electricity	205,339	214,933	4.7%	2,036	687	-66.3%
	Natural Gas	-	-	-	-	-	-
Residential Buildings	Fuel Oil	27,326	55,796	104.2%	1,868	3,814	104.2%
	Propane	24,684	25,126	1.8%	1,501	1,533	2.1%
	Wood	206,032	205,113	-0.4%	5,293	5,269	-0.4%
	Diesel	2,683	1,922	-28.4%	198	138	-30.3%

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
Commercial & Industrial Buildings	Electricity	45,106	48,348	7.2%	447	154	-65.5%
	Natural Gas	-	-	-	-	-	-
	Fuel Oil	-	-	-	-	-	-
	Diesel	8,608	15,218	76.8%	634	1,092	72.1%
Energy Industries	LFG Combustion			-	-	-	-
Agriculture, Forestry And Fishing Activities	Diesel	26,403	26,714	1.2%	1,946	1,917	-1.5%
Natural Gas Fugitive Emissions				-	-	-	-
<b>Total</b>		<b>546,181</b>	<b>593,168</b>	<b>8.6%</b>	<b>13,924</b>	<b>14,604</b>	<b>4.9%</b>
<b>On-Road Transportation</b>							
Electric Vehicles	Electricity	-	1	-	-	4	-
Hydrogen Vehicles	Hydrogen	-	-	-	-	-	-
Passenger Vehicles	Gasoline + Diesel	115,551	33,298	-71.2%	7,772	2,172	-72.0%
Light Trucks, Vans, SUVs	Gasoline + Diesel	63,232	143,707	127.3%	4,308	9,497	120.4%
Heavy Duty Vehicles	Gasoline + Diesel	16,337	51,972	218.1%	1,082	3,403	214.5%
Propane Vehicles	Propane	-	636	-	-	36	-
Natural Gas Vehicles	Natural Gas	-	-	-	-	-	-
Motorcycles	Gasoline	916	733	-20.0%	63	47	-25.0%
<b>Total On-Road Transportation</b>		<b>196,036</b>	<b>230,347</b>	<b>17.5%</b>	<b>13,225</b>	<b>15,159</b>	<b>14.6%</b>
<b>Off-Road Transportation</b>							
Marine, Aviation and Other Off-Road Vehicles	Gasoline + Diesel + Jet Fuel	24,482	24,504	0.1%	1,813	1,811	-0.1%
<b>Total Off-Road Transportation</b>		<b>24,482</b>	<b>24,504</b>	<b>0.1%</b>	<b>1,813</b>	<b>1,811</b>	<b>-0.1%</b>
<b>Waste</b>							

Source	Type	2007 Energy (GJ)	2022 Energy (GJ)	Change (%)	2007 GHG Emissions (tCO <sub>2</sub> e)	2022 GHG Emissions (tCO <sub>2</sub> e)	Change (%)
Wastewater					24	5	-77.8%
Composting					0	0	-
Solid Waste					1,616	460	-71.5%
<b>Total Waste</b>					<b>1,641</b>	<b>466</b>	<b>-71.6%</b>
<b>Agriculture Forestry &amp; Other Land Use (AFOLU)</b>							
Land-Use: Emissions Sequestered ( <b>Disclosure Only - Not Included In Total</b> )					-33,172	-34,324	3.5%
Land-Use: Emissions Released ( <b>Disclosure Only - Not Included In Total</b> )					24,093	24,143	0.2%
Livestock, Aggregate Sources and Non-CO <sub>2</sub> Emission Sources on Land					387	1,542	298.6%
<b>Total AFOLU</b>					<b>387</b>	<b>1,542</b>	<b>298.6%</b>
<b>Industrial Process &amp; Product Use (IPPU)</b>							
Process Use Emissions					1,026	1,753	70.9%
<b>Total IPPU</b>					<b>1,026</b>	<b>1,753</b>	<b>70.9%</b>
<b>TOTAL</b>		<b>766,699</b>	<b>848,020</b>	<b>10.6%</b>	<b>32,015</b>	<b>35,335</b>	<b>10.4%</b>