

cleanBC

# 2021 Climate Change Accountability Report





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# Message from the Minister



Climate change is the biggest global challenge of our time. It is a generational crisis where the impacts of our actions to reduce greenhouse gas pollution in the atmosphere will have lasting consequences for decades to come. It is also a crisis that is increasing in its scope and severity as time moves forward.

This past year showed just how serious these impacts already are. People and ecosystems across the province were profoundly affected by an unprecedented heat wave, severe droughts, and dangerous wildfires.

British Columbians care deeply about the beautiful places we live in and call home. We take pride in our connection to the natural environment – to the pristine watersheds, lush forests, soaring mountains and rich farmland that surround us. We have a love of place that enlivens our communities and we want to protect what matters most to us.

All of this underlines the urgency that must guide our actions to address climate change – both by reducing our emissions and by preparing our communities for the impacts to come.

The good news is that by responding to the crisis, we have an incredible opportunity ahead to create new benefits for people and businesses in the clean economy. As the world begins to reduce emissions, the demand for innovative solutions and products will continue to grow. Businesses from around the world are looking for new places to invest that will support their plans to get to net-zero to meet growing demands from investors.

CleanBC is our plan to meet these challenges and opportunities head on. The plan sets out a series of actions to protect our communities and our cherished natural environments so that we can all work together to build a cleaner, stronger future.

The Climate Change Accountability Report is central to this effort. It provides increased transparency and public accountability as we progress in our journey to build that better future.

We've seen some significant successes in a number of areas. B.C. continues to be a leader on electric vehicles. When we announced that all new cars and trucks sold in the province would be zero emissions by 2040, we were the first place in North America to do so. We later became the first jurisdiction in the world to put that commitment into law. Since that time, we've seen people respond and B.C. is the top jurisdiction on the continent for EV uptake.

There are many other examples detailed in this report. But this progress is not without its setbacks. As part of last year's accountability report, new information and emissions modelling showed that we are further away from our 2030 emissions targets than we previously forecasted.

At the time, I committed to releasing a detailed roadmap to meet those targets by the end of 2021. I'm pleased to report that work is now complete, as part of the CleanBC Roadmap to 2030 report. It contains a range of accelerated and expanded actions that will make sure B.C. meets its legislated targets and builds a cleaner economy for everyone.

The Roadmap calls for a significant increase in the scale and scope of our actions through CleanBC. It involves substantial engagement and collaboration with partners, including the independent Climate Solutions Council.

People in British Columbia continue to show that hard work, ingenuity and a genuine commitment to collaboration will see us through. This has been true in our response to COVID-19 and I am confident these same qualities will lead to our success in addressing climate change and its impacts.

Our CleanBC plan has set a better, stronger future in motion. Now is the right time to expand and accelerate our actions to achieve long term success. The record set out in this year's Accountability report shows us how challenging this work can be. Our Roadmap to 2030 sets out the pathways to achieving success in response to the biggest challenge facing our world.

George Heyman

Minister of Environment and Climate Change Strategy and Minister Responsible for TransLink





# 1 | Executive Summary

When CleanBC launched in late 2018 it included a foundational commitment to public transparency and accountability. That commitment was based on the understanding that it wasn't enough for government to take actions across sectors to reduce emissions and build a cleaner economy. Actions needed to be tracked and updated over time to ensure they have their intended effect and that we meet our emissions targets.

In 2019, government put a new climate accountability framework into law that mandated annual reporting on a range of measures of progress. The 2021 Climate Change Accountability Report is the second official report released since that time. It includes a range of information detailing significant progress across a suite of policies, programs and legislation implemented over the previous year.

Examples include:

- Continued progress on the transition to zero emission vehicles (ZEVs), with a new regulation brought into force in 2020 mandating 100% of new cars be ZEVs by 2040. B.C. had the highest uptake in new electric light-duty cars and trucks in North America at 9.4% in 2020 – nearly meeting our target of 10% by 2025 five years early.
- B.C.'s electric vehicle public charging network continued to expand, totalling more than 2,100 public Level 2 charging stations and 480 fast charging stations as of December 2020.
- The province is on track to exceed our 2030 target of producing 650 million litres of low-carbon renewable fuel in B.C. per year. We now estimate that almost 885 million litres a year will be produced in B.C. by 2025.
- Fifty-two communities now reference the BC Energy Step Code in municipal policy or regulation for new building construction. The Step Code sets out a series of energy efficiency requirements beyond the base BC Building Code.
- New provincial methane regulations for the upstream natural gas sector came into effect on Jan. 1, 2020 that are designed to reduce methane emissions by 45% by 2025.
- The Province funded 22 emissions-reduction projects across the province together with industry in early 2021 through the CleanBC Industry Fund.

The Province also set a greenhouse gas emissions target for 2025 (16% below 2007) and sectoral emissions targets for transportation, industry, oil and gas, and buildings and communities – making it the first province in Canada to do so.

To support people and businesses during the COVID-19 pandemic, government ramped up funding for CleanBC programs as part of the StrongerBC economic recovery plan. This included funding for medium- and heavy-duty zero emission vehicles, mass timber buildings, innovative energy efficiency technology and building design, wildfire risk reduction, and watershed and ecosystem restoration projects, among others.

StrongerBC also made significant investments to reduce plastic waste in our natural environment through the Clean Coast, Clean Waters Initiative Fund – part of the CleanBC Plastics Action Plan. The initiative recovered plastic debris from hundreds of kilometres of B.C.'s shoreline in partnership with coastal Indigenous communities, tourism operators and non-profits.

Yet despite progress made across sectors, the latest emissions data illustrate the challenge ahead. The [2019 greenhouse gas emissions inventory](#) – the most recent available – shows that B.C.'s emissions increased slightly from the previous year to reach a total of 2% above 2007 levels after applying forest carbon offsets. While this reporting period covers the start-up phase of CleanBC – launched in December 2018 – we expect to see more substantial reductions as the full suite of policies take effect in the years ahead.

It's clear that more needs to be done for B.C. to meet its legislated targets. New emissions projections show that existing actions in CleanBC are expected to get us approximately 40% to our 2030 target. To fill this gap, the Province's new [CleanBC Roadmap to 2030](#) outlines a range of expanded and accelerated actions to fully meet our target by cutting more pollution and building a cleaner economy for everyone.

This commitment strengthens our efforts and is a direct result of the climate accountability framework. Through regular reporting we have been able to see what policies and programs are working well and where more work is needed. The framework supports informed decision making and provides the foresight needed to adjust our actions over time to make sure we're on track as new information and events unfold.

The need for stronger action has never been more urgent. Over the past year, people across the province have seen the impacts of climate change from unprecedented heatwaves, extreme drought and another season of dangerous wildfires. To help prepare for future impacts, government released the [draft Climate Preparedness and Adaptation Strategy](#), which builds on a wide array of actions already underway and will be finalized in early 2022.

We know that more needs to be done and are committed to working together with partners across the province to make sure we meet our commitments and build a cleaner, more resilient future for people in British Columbia.

### CLIMATE CHANGE ACCOUNTABILITY ACT

To help keep CleanBC on track, the Province established a framework for stronger accountability under the *Climate Change Accountability Act*.

The Act requires the Province to annually:

- publish its most recent GHG inventory;
- estimate B.C.'s emissions for the current year and next three years;
- outline expected outcomes of climate action;
- report on expenditures to reduce emissions and manage risks;
- report on actions taken and proposed to reduce emissions and manage risks from climate change;
- report on reducing emissions and managing risks across the provincial public sector;
- report on plans to continue progress towards achieving climate targets and managing climate change risk; and
- outline advice received from the independent Climate Solutions Council.

Details to fulfill these commitments are included in this report.

A group of five hikers are gathered in a forest, looking at a map held by one of the hikers. They are wearing backpacks and hiking gear. The scene is outdoors with trees and foliage in the background.

## 2 | Progress to our Targets

British Columbia has set ambitious but necessary targets in law to reduce greenhouse gas (GHG) emissions to 40% below 2007 levels by 2030, 60% by 2040 and 80% by 2050. B.C. has also set 2030 emission reduction targets across four sectors, expressed as ranges:

- Transportation, 27-32%
- Industry, 38-43%
- Oil and gas, 33-38%
- Buildings and communities, 59-64%

These targets serve as guideposts to keep government on track. We have also set a 2025 interim target so we have a nearer term goal to measure progress against.

In December 2018, we launched our CleanBC plan, with a series of actions to reduce emissions and transition to a low-carbon economy. In October 2021, we released the [CleanBC Roadmap to 2030](#), which builds on the previous plan with significant new and expanded actions across eight pathways that will accelerate emissions reductions to reach our climate and clean economy goals.

This section provides an update on our progress over the past year, including:

- B.C.'s 2019 emissions (the latest available emissions data)
- B.C.'s emissions estimates
- Climate-related spending

## B.C.'S 2019 EMISSIONS

B.C.'s GHG emissions reporting is based on the National Inventory Report from Environment and Climate Change Canada. The [latest GHG data for British Columbia](#) is for 2019, due to the necessary 16-24 month period to collect, verify and review the data from the federal government.

In 2019, B.C.'s gross GHG emissions were 68.6 million tonnes of carbon dioxide equivalent (Mt CO<sub>2</sub>e). This represents an increase of less than 1% from 2018 (0.2 Mt CO<sub>2</sub>e) and 5% from 2007 levels (3.0 Mt CO<sub>2</sub>e). The main reasons for the increase in emissions since 2018 are increased industrial and transportation emissions, as well as changes in the methodology to quantify deforestation and waste emissions.<sup>1</sup>

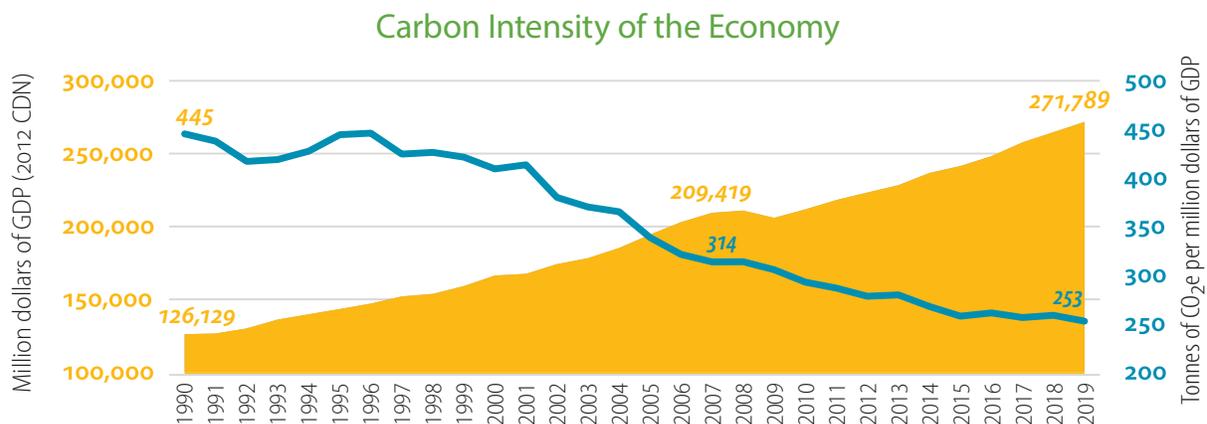
B.C. applies emission reductions from validated forest management offset projects to our official emissions total every year. In 2019, emissions from these offset projects totalled 1.4 Mt CO<sub>2</sub>e, which reduced our net GHG emissions to 67.2 Mt CO<sub>2</sub>e.<sup>2</sup> This represents a net increase of 2% from 2007 levels (1.5 Mt CO<sub>2</sub>e).<sup>3</sup>

These numbers are in line with last year's emissions forecast, which predicted 2019 emissions would be between 66.5 – 69.5 Mt CO<sub>2</sub>e. This is partly because 2019 data does not yet reflect the results of CleanBC actions, most of which began implementation in 2019 with resulting emissions reductions expected in coming years. Our current emissions forecast projects that the emissions curve will begin to bend downwards starting in 2020, thanks in part to CleanBC actions and temporary emissions reductions from the COVID-19 economic downturn.

## Economic Transition

The carbon intensity of the economy helps to measure how B.C. is doing in the transition to a clean economy.

Between 2007 and 2019, net GHG emissions grew by 2% while the economy grew by 30%. That means that the GHG intensity of our economy decreased by 19% between 2007 and 2019. In last year's report, the data showed the GHG intensity of our economy was down 16%, meaning GHG intensity continues to fall and is expected to decline significantly more as we reduce emissions towards our targets.



<sup>1</sup> Industrial emission increases are largely due to increases in emissions from public electricity and heat production (+0.3 Mt CO<sub>2</sub>e) and oil and gas extraction (+0.2 Mt CO<sub>2</sub>e). The methodology change in quantifying waste emissions, which increased 2018 emissions from 3.5 Mt CO<sub>2</sub>e to 4.2 Mt CO<sub>2</sub>e, included new ways to quantify methane from the Intergovernmental Panel on Climate Change. The change in deforestation methodology, which increased 2018 emissions from 2.4 Mt CO<sub>2</sub>e to 2.9 Mt CO<sub>2</sub>e, included improved mapping of deforestation, new estimations of emissions from burning and logging for conversion to croplands and settlement lands, and better inclusion of firewood under deforestation's harvested wood products emissions. More detail on the 1990-2019 emissions inventory and methodologies is available on [B.C.'s Provincial Inventory website](#).

<sup>2</sup> Validated offset projects include four improved forest management projects, three in the Great Bear Rainforest and one in Cheakamus, as well as one avoided conversion project on Quadra Island. The bulk of emissions reductions from these offsets come from the Great Bear Rainforest. See the [public view of the BC Carbon Registry](#) for more detail.

<sup>3</sup> Emission amounts have been rounded so, when summed, may not equal the total.

## 2. Progress to our Targets

GHG emissions per person have also declined by roughly 12% between 2007 and 2019 – from 15.3 tonnes of CO<sub>2</sub>e to 13.5 tonnes of CO<sub>2</sub>e.

While both of these measures show positive signs we're building a cleaner economy, the ultimate measure of progress is absolute emissions reductions to ensure we meet our GHG targets.

### Sector-specific emissions

In March 2021, the Province established new 2030 [emission reduction targets](#) for four sectors,<sup>4</sup> with 2007 as the baseline:

- Transportation, 27-32%
- Industry, 38-43%
- Oil and gas, 33-38%
- Buildings and communities, 59-64%

Actions to help meet our GHG targets are summarized in Chapter 3, with further information in our [climate accountability web pages](#).

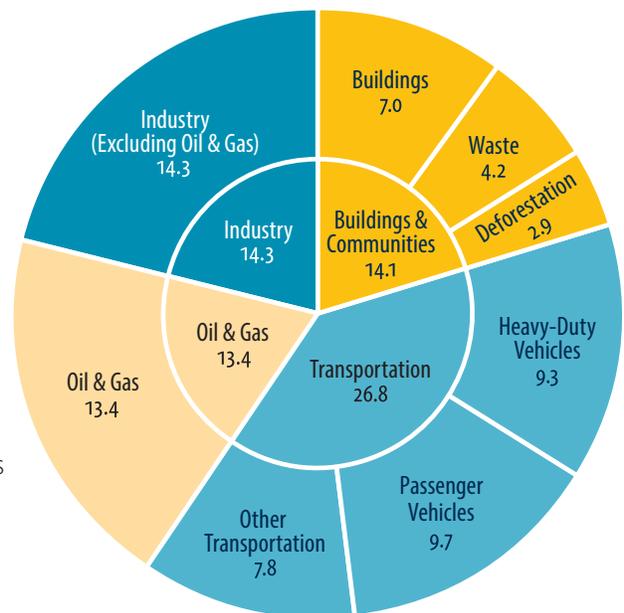
In 2019, transportation remained the largest source of B.C.'s emissions. While emissions from this sector decreased slightly from 2018 (-0.2 Mt CO<sub>2</sub>e), emissions since 2007 have increased 22%, largely due to increases from heavy-duty vehicles (+29%)<sup>5</sup> and to a lesser extent from passenger vehicles (+14%).

Emissions in the buildings and communities sector have fallen by 12% compared to 2007 levels, driven by decreases in emissions from residential and commercial buildings (-8%). Waste emissions are down 24% from 2007, due in part to declines in solid waste disposal (-24%) and industrial wood waste (-28%).

Emissions in the oil and gas sector have decreased slightly since 2007 (-1%). Venting and flaring emissions are down by 31% from 2007 levels, while oil and gas extraction emissions are up 10%.

Emissions in the industry sector were largely flat in 2019 compared to the previous year and increased by 2% compared to 2007 levels. Agriculture emissions increased from 2007 (+17%)<sup>6</sup>, though agriculture accounts for less than 5% of emissions and these increases have been largely offset by declines in other sub-sectors, such as light manufacturing emissions (-25%).

B.C.'s 2019 Gross Emissions  
by Sector – 68.6 Mt CO<sub>2</sub>e



<sup>4</sup> Definitions of the four sectors are listed on the [Climate Reporting](#) web page.

<sup>5</sup> Changes in emissions are estimated based on emissions categories as defined by the Intergovernmental Panel on Climate Change (IPCC), unless otherwise noted.

<sup>6</sup> Estimated based on economic sectors, as defined in the [Methodology Book for the British Columbia Provincial Inventory of Greenhouse Gas Emissions](#).

## B.C.'s 2019 GHG Emissions by Sector

Sector	2019 emissions (Mt CO <sub>2</sub> e)	Percent of total	Emissions change from 2007	Emissions change from 2018
Transportation	26.8	39%	+22%	-1%
Buildings and Communities	14.1	21%	-12%	+1%
Oil and Gas	13.4	19%	-1%	+1%
Other Industry	14.3	21%	+2%	0%

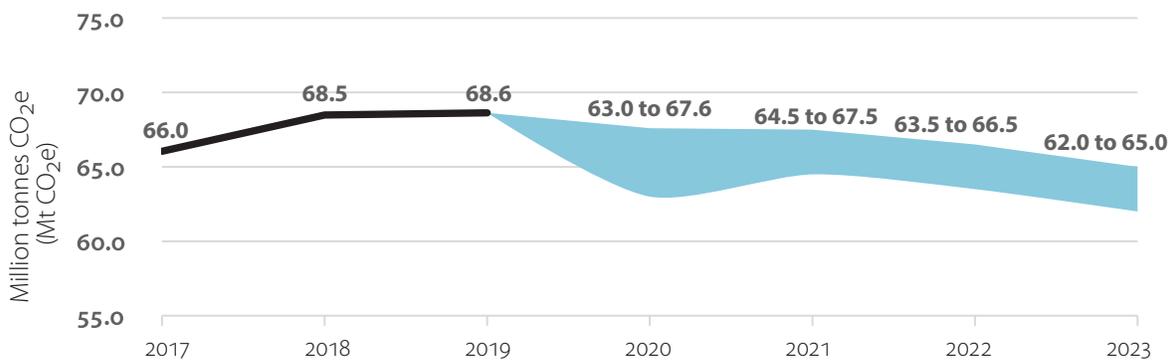
## B.C.'S EMISSIONS ESTIMATES

B.C. estimates future GHG emissions as a range to represent uncertainties in data and modelling. Reflecting this uncertainty is particularly relevant when considering different COVID-19 recovery scenarios, oil and natural gas price forecasts and different levels of industrial growth.

### Near-term Outlook to 2023

B.C.'s near-term outlook estimates emissions for the four years after the most recently available GHG data. The outlook suggests that emissions will level off before beginning a downward trajectory, as CleanBC policies begin to take hold and emissions decline from the COVID-19 economic downturn.

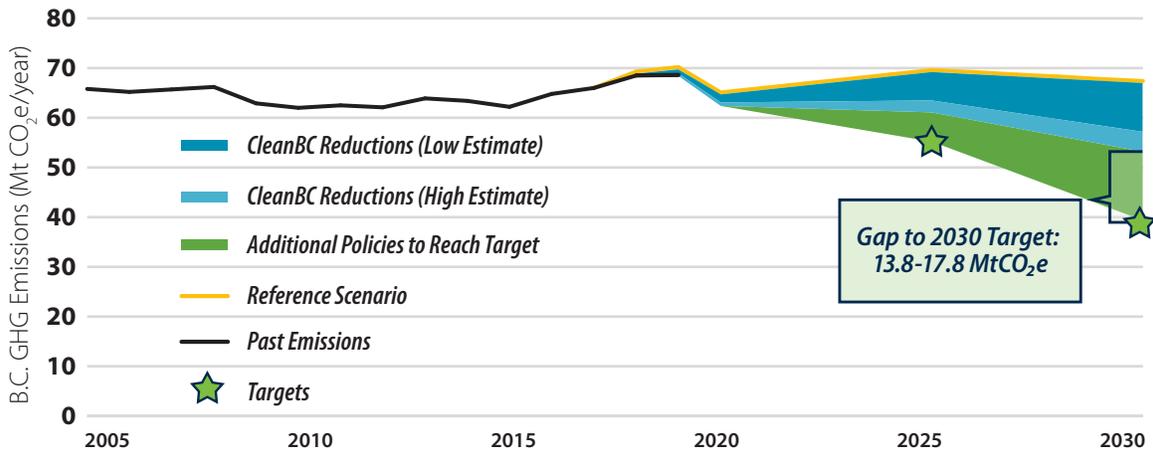
#### GHG Emissions Forecast from 2020 to 2023



## CleanBC Projections to 2030

The following projections do not include actions from the [CleanBC Roadmap to 2030](#). With Roadmap actions taken into consideration, we expect to reach our 2030 climate targets.

### Pathway to Meeting B.C.'s 2030 Target



Each year, we update our model with the most recent data and develop revised estimates. For the 2021 report, B.C. estimates existing CleanBC climate actions will result in a 2030 emissions total of approximately 55.2 Mt CO<sub>2</sub>e, roughly equal to 40% of the way to B.C.'s 2030 target. Due to uncertainties in emissions modelling, B.C. expresses these projections as a range of between 53.2 Mt CO<sub>2</sub>e and 57.2 Mt CO<sub>2</sub>e. This is between 32% and 48% of B.C.'s 2030 target. This is a larger gap to the 2030 target than estimated in last year's report and is largely due to:

- Updated assumptions for CleanBC modelling that result in fewer reductions. For example, an increased natural gas price, higher electrification costs, and a lower electricity load forecast causes higher industrial emissions estimates, particularly in the natural gas and manufacturing sectors;
- Updated historical trends where emissions have been increasing. For example, emissions projections increased in sectors such as pulp and paper (due to production increases) and transportation (due in part to a preference for larger vehicles); and
- Emissions methodology changes, such as updating emissions totals for waste and land-use change emissions based on a revised approach by the federal government.

Additional information can be found on updated CleanBC modelling in our [modelling methodology report](#) and on emission trends and methodology in the [Provincial Inventory](#) section of our website.

B.C. remains committed to reducing greenhouse gas emissions by 40% below 2007 levels by 2030 and building a low-carbon economy. We recently released the [CleanBC Roadmap to 2030](#) that lays the path to reaching our 2030 climate target and provides the foundation for achieving net-zero emissions by 2050. The Roadmap builds on CleanBC policies and identifies new actions across eight specific pathways. These include expanding policies and encouraging the investments and market drivers needed to eliminate carbon across our economy, so we use clean energy and waste less.

## CLIMATE-RELATED SPENDING

B.C.'s carbon tax has increased from \$30 per tonne of CO<sub>2</sub>e emissions in 2017 to \$35 per tonne in 2018, \$40 per tonne in 2019, and \$45 per tonne on April 1, 2021 (there was no increase in 2020; the scheduled annual increase was deferred as a COVID-19 relief measure). On April 1, 2022, the carbon tax will increase to \$50 per tonne.

The table below outlines the Province's total carbon tax revenues and the incremental carbon tax revenues resulting from rate increases above \$30 per tonne. Revenues account for the carbon tax remaining at \$40 per tonne in 2020 as a COVID-19 relief measure. Government is expected to collect \$654 million in incremental carbon tax revenue due to rate increases that began after 2017/18 when government collected \$1.255 billion in carbon tax revenues.

### Carbon Tax Revenues, Illustrating Tax Increase Impacts, by Fiscal Year

\$ millions	Actual 2019/20	Actual 2020/21	Forecast 2021/22
<b>Carbon tax rate, \$ per tonne</b>	<b>\$40</b>	<b>\$40</b>	<b>\$45</b>
<b>Total carbon tax revenue</b>	<b>1,682</b>	<b>1,683</b>	<b>2,068</b>
<b>Annual revenue growth</b>	<b>217</b>	<b>1</b>	<b>385</b>
<b>Revenue growth due to base (i.e. changes to consumption)</b>	<b>12</b>	<b>1</b>	<b>145</b>
<b>Revenue growth due to rate increases</b>	<b>205</b>	<b>-</b>	<b>240</b>
<b>Revenue growth due to rate increases – Cumulative Totals*</b>	<b>414</b>	<b>414</b>	<b>654</b>

\*Cumulative total of incremental carbon tax above \$30/tonne since increases started in 2017.

Note: The carbon tax did not increase in 2020/21, therefore revenues associated with a cumulative rate increase are nil between 2019/20 to 2020/21.

The second table below outlines the expenditures for carbon tax rebates and measures to reduce greenhouse gas emissions and address climate change risks for each fiscal year. Spending on climate-related initiatives includes CleanBC operating and capital spending broken down into sectors (e.g. cleaner transportation, cleaner buildings, clean industry, etc.) that include government programs for energy efficient buildings, Indigenous and remote communities, the CleanBC Program for Industry, and other CleanBC programming.

Other operating spending outside of CleanBC in the table below includes the First Nations Clean Energy Business Fund and the Forest Carbon Initiative. It also includes spending related to adapting to climate change events such as increased flooding and forest fires and funding the Forest Enhancement Society. Capital spending includes the expansion of Vancouver's Broadway Subway and other major projects.

Government spent a total of \$1.33 billion on climate-related initiatives in 2020/21 and StrongerBC (September 2020). Government spending on climate related initiatives is expected to total approximately \$1.466 billion in 2021/22 based on investments announced in *Budget 2021* and previous budgets.

## Clean Investments

Climate Action Initiatives	Sum of Actuals 2020/21	Forecast 2021/22
<b>OPERATING INVESTMENTS</b>		
Cleaner Buildings and Communities	83.34	117.68
Cleaner Industry	104.64	119.93
Cleaner Transportation	86.00	84.22
Climate Action Tax Credit <sup>7</sup>	303.39	312.00
Other Clean Spending <sup>8</sup>	82.97	131.31
Stronger BC Climate Action Spending <sup>9</sup>	186.58	0.00
Transit Projects <sup>10</sup>	126.86	149.76
<b>TOTAL</b>	<b>973.77</b>	<b>914.90</b>
<b>CAPITAL INVESTMENTS</b>		
Cleaner Government and Public Sector	44.39	58.25
Cleaner Buildings and Communities	4.38	13.70
Cleaner Transportation	3.24	7.00
Transit Projects <sup>10</sup>	305.43	472.56
<b>TOTAL</b>	<b>357.43</b>	<b>551.51</b>
<b>GRAND TOTAL</b>	<b>1331.20</b>	<b>1466.41</b>

Note: Amounts in each year are not cumulative and totals may not add due to rounding. Amounts are not audited. The list may not capture all climate-related spending by government and this presentation may expand in subsequent reports.

Budget 2021 confirmed government's commitment of over \$2.2 billion over five years in cumulative spending on CleanBC initiatives since 2019/20. The table above also includes climate spending outside of CleanBC programming, which increases overall spending per fiscal year.

<sup>7</sup> The climate action tax credit amount for 2020/21 does not incorporate the one-time enhancement the B.C. government provided as part B.C.'s COVID-19 Action Plan.

<sup>8</sup> Other clean spending includes spending on climate adaptation, energy efficient public sector buildings, clean tech innovation, waste, Forest Carbon Initiative, and others.

<sup>9</sup> StrongerBC climate action funding was for 2020/21 only.

<sup>10</sup> Transit project budgets may change on an annual basis as funding is reprofiled.



## 3 | Getting Results

This chapter details CleanBC results from fiscal year 2020-2021, and planned actions for 2021-2022. It does not include any actions from the [CleanBC Roadmap to 2030](#).

In B.C., transportation, industry, and our buildings and communities are the greatest sources of GHGs. Through our 2018 CleanBC plan and the recently released Roadmap to 2030, we're working closely with Indigenous Nations and organizations, industry, governments and others to focus on these sectors.

B.C.'s 2021 [draft Climate Preparedness and Adaptation Strategy](#) includes actions to help the province prepare for the impacts of climate change now and into the future.

In this section, we highlight actions taken in 2020 and proposed actions in 2021 across five areas:

- Cleaner Transportation
- Better Buildings and Communities
- Cleaner Industry
- Climate Preparedness
- Public Sector Leadership

For complete details on CleanBC programs, please see the [Mitigation table](#), and [Climate Preparedness table](#), which outline the actions we've taken as part of CleanBC commitments in the previous fiscal year (April 1, 2020 – March 31, 2021), as well as our proposed actions in this fiscal year (April 1, 2021 – March 31, 2022).

The [Climate Change Accountability Act](#) also requires government to report on plans to continue progress towards achieving climate targets. The recently released [CleanBC Roadmap to 2030](#) expands B.C.'s efforts to meet the climate challenge by going further faster on original CleanBC commitments, while laying the foundation for additional emissions reductions that are necessary to achieve net zero emissions by 2050.

## CLEANER TRANSPORTATION

**CleanBC Goals:** Making electric vehicles more affordable, shifting to renewable fuels, and investing in charging and hydrogen refuelling stations, active transportation and public transit.

**Estimated Results:** Current actions are estimated to reduce emissions by 4.5 Mt CO<sub>2</sub>e by 2030.

### Highlights on Clean Vehicles

In 2020-2021, government introduced programs to address emissions from commercial transportation, including a new [CleanBC Go Electric Fleets Program](#), support to purchase electric school buses, a new CleanBC Go Electric Commercial Vehicle Pilots Program, and increased investment in the Specialty Use Vehicle Program under StrongerBC, with double the rebates for tourism and hospitality businesses. In addition, government continues to support the CleanBC Heavy-Duty Vehicle Efficiency Program with the BC Trucking Association.

In July 2020, the [Zero-Emission Vehicle \(ZEV\) Regulation](#) was brought into force, mandating 100% of new cars to be ZEVs by 2040. B.C. continued its incentives for purchasing ZEVs and charging at home and at work, leading to 9.4% of all new light-duty vehicle sales being ZEVs, almost reaching the 10% by 2025 target. In addition, government continued to expand our public fast-charging network and added more hydrogen fueling stations.

### Highlights on Cleaner Fuels

B.C. increased the strength of the [Low Carbon Fuel Standard \(LCFS\)](#) in 2020 and released the [Hydrogen Strategy](#) in 2021. These initiatives will increase the low-carbon content in regular fuels like gasoline and diesel and will support the adoption of hydrogen and fuel-cell technologies in the province, which will help reduce emissions from commercial transportation and industry.

B.C. is on track to exceed our 2030 target of producing 650 million litres of low-carbon renewable fuel in B.C. per year. We now estimate that 884 million litres a year will be produced in B.C. by 2025. This means we are significantly ahead of expectations on this target.

### Highlights on Transit and Active Transportation

After releasing B.C.'s first active transportation strategy in 2019, we've implemented programs to help meet our target of doubling trips by 2030, including a new [Active Transportation Report Card](#).

The Province removed the PST on e-bikes, provided funding to communities through the [Active Transportation Infrastructure Grant Program](#) and launched the [UBCM Active Transportation Planning program](#).



### TRANSPORTATION

- 2019 emissions: 26.8 Mt CO<sub>2</sub>e (39% of total)
- Emissions change from 2007: +22%

B.C. is focusing on programs such as the ZEV standard, ZEV rebates and charging infrastructure, and making it easier to use transit, cycle and walk.

Increasing the Low Carbon Fuel Standard, renewable fuel supply and clean technology will reduce heavy-duty vehicle GHGs.

In 2019, B.C.'s ZEV sector contributed \$600 million to provincial GDP.

On public transit, we've helped expand public transportation across B.C., including 52 new sky train cars in Metro Vancouver, while continuing to support plans to transition BC Transit and TransLink fleets to compressed natural gas and electric buses.

The Province is partnering with the federal government on the [Surrey Langley SkyTrain extension](#), serving 25% of the Metro Vancouver population, and on developing a business case for the [proposed extension of the Millennium Line](#) from Arbutus Station to the University of British Columbia.

BC Transit began implementing its [Low Carbon Fleet Program](#), which focuses on a 10-year strategy to transition BC Transit's current diesel-based fleet to lower carbon alternatives of electric and compressed natural gas (CNG) buses, eventually having a 100% low carbon, fully electric provincial fleet by 2040.

In 2020, BC Transit introduced 60 new CNG buses in Victoria and opened a new transit operations centre with a CNG fuelling station in the Central Fraser Valley. In 2021, BC Transit will procure its first 10 battery-electric buses for deployment in Victoria in 2022. As part of *Budget 2021*, the Province also made public transit free for all children 12 and under in B.C. starting September 1, 2021.

In addition, our government and the Government of Canada provided more than \$1 billion as part of the Safe Restart agreement with BC Transit, TransLink and BC Ferries to ensure people in B.C. could continue to access safe, reliable and affordable public transportation during the pandemic.

BC Ferries has been operating two Island Class ferries – the first of a series of hybrid-electric ships designed to be fully electric in the future – and plans to bring four more into service in 2022.



## BETTER BUILDINGS AND COMMUNITIES

**CleanBC Goal:** Helping British Columbians conserve energy and making homes, buildings and communities healthier and more livable, while reducing emissions.

**Estimated Results:** Current actions are estimated to reduce emissions by 2.6 Mt CO<sub>2</sub>e by 2030.

### Highlights on Better Buildings

Local governments are increasing energy efficiency requirements in new buildings through continued adoption of the [BC Energy Step Code](#) (ESC). To date, 52 communities have voluntarily referenced the ESC in policy, programs, or by-laws.

B.C. is now focusing on developing requirements for 20% energy efficiency improvement in the BC Building Code by 2022, the first step toward “net-zero energy ready” by 2032.

In 2020-2021, the CleanBC [Better Homes](#) and [Better Buildings](#) programs substantially increased uptake of rebates and coaching services to reduce emissions, partly due to a doubling of rebates as a COVID-19 relief measure.

The Province also introduced new initiatives to make improvements more affordable, including the [CleanBC Better Homes Low Interest Financing](#) program for switching to heat pumps, an easy-to-use program for small businesses, incentives for energy-efficient new homes, and an income-qualified program.

The Province is also funding a pilot program for retrofits in rental apartments, and developing a new Property Assessed Clean Energy financing program that would lessen the up-front costs of energy retrofits for homeowners by allowing repayments over time.

### Highlights for Communities

The Province continued to provide substantial funding to help communities move to a cleaner economy. For example, the [CleanBC Communities Fund](#) advanced 16 projects for clean infrastructure, energy and transportation in its first funding intake, with a second intake currently underway. Through the [Remote Community Energy Strategy](#), B.C. is working with remote and Indigenous communities to transition from diesel to cleaner energy. And through the [BC Indigenous Clean Energy Initiative](#), the Province continues to support Indigenous-led clean energy and energy efficiency projects.

Government is working with communities and partners to launch additional rounds of funding in 2021 and 2022 to not only address emissions but support access to cleaner energy and new skills and jobs.



### BUILDINGS, COMMUNITIES & WASTE

- 2019 emissions: 14.1 Mt CO<sub>2</sub>e (21% of total)
- Emissions change from 2007: -12%

B.C. is focusing on improving building code energy efficiency and encouraging building upgrades through incentives and education.

Multi-year funds are supporting new technologies, expanding clean infrastructure, energy and transportation projects, and improving facilities and programs to address organic waste and plastics.

**Highlights on Reducing Waste**

In 2020-2021, B.C. made significant progress towards reducing waste – both in terms of direct emissions from organic waste and those associated with production of new materials.

Two new B.C. programs supported building 14 new organics processing facilities and investing in new or expanded organic waste processing infrastructure and residential organic waste collection. In 2020, B.C. launched the [CleanBC Plastics Action Fund](#) to decrease plastics pollutions, expand B.C.'s recycling program and increase the use of recycled plastics. The [Clean Coast, Clean Waters Initiative Fund](#), launched in December 2020, is helping clean up the marine shoreline and derelict vessels in partnership with coastal Indigenous Nations, tourism operators and non-profits.



## CLEANER INDUSTRY

**CleanBC Goal:** Making B.C. industries the cleanest in the world to support good jobs, use cleaner energy and promote energy efficiency.

**Estimated Results:** Current actions are estimated to reduce emissions by 7.3 Mt CO<sub>2</sub>e by 2030.

### Highlights on Reducing Industrial Emissions

The CleanBC Program for Industry continued to reduce industrial emissions while supporting industry competitiveness. The government announced funding through the [CleanBC Industry Fund](#) for 13 emissions-reductions projects beginning in December 2019 and throughout 2020 totalling over 400,000 tonnes of CO<sub>2</sub>e to 2030. In early 2021, 22 additional emissions-reduction projects were announced totalling almost 1 Mt CO<sub>2</sub>e to 2030. The fund also launched two additional funding streams: the new Innovation Accelerator stream to further support industry in piloting advanced clean technologies or processes with potential to reduce emissions, and the Project Feasibility Studies stream which works to remove barriers, mitigate risks and determine the viability of potential emissions reduction projects.

The [CleanBC Industrial Incentive Program](#) (CIIP) directs a portion of B.C.'s carbon tax paid by industry into incentives for cleaner operations. Currently in its third year, CIIP supports competitiveness by reducing the carbon tax costs for operators that demonstrate that they are among the cleanest operations in the world. Participation rates in the program were strong – companies representing 88% of total reported industrial emissions participated in the program and were covered by a world-leading emissions performance benchmark.

New provincial methane regulations designed to reduce methane emissions by 45% by 2025 (estimated to be the equivalent of 10.9 Mt CO<sub>2</sub>e over a 10-year period) came into effect on Jan. 1, 2020. The BC Methane Emissions Research collaborative, a multi-stakeholder initiative, is supporting this work through research projects that will inform the Oil and Gas Commission's planned review of the regulations at the end of 2022.

B.C. continues to work with industry and partners to increase the use of clean electricity in industrial operations. A new 2021 agreement between the Province, Government of Canada and BC Hydro will reduce rates and lower the costs of connecting to the electricity grid to help industries, public transportation agencies and neighbourhood energy systems reduce greenhouse gas emissions and attract new investment to B.C. The Province also announced a new [CleanBC Facilities Electrification Fund](#) to help customers reduce the costs of connecting to the electricity grid or upgrading their connections.



### INDUSTRY

#### Oil and Gas

- 2019 emissions: 13.4 Mt CO<sub>2</sub>e (19% of total)
- Emissions change from 2007: -1%

#### Other Industry

- 2019 emissions: 14.3 Mt CO<sub>2</sub>e (21% of total)
- Emissions change from 2007: +2%

B.C. is focusing on the CleanBC Program for Industry and methane regulations to spur innovation and reduce emissions in large facilities in the near term.

Longer-term actions are to expand industrial access to clean electricity, support carbon capture, utilization and storage (CCUS) and increase the supply of clean hydrogen and biofuels.

**Highlights on Supporting Clean Growth**

Earlier this year, we announced a new \$500-million strategic investment fund called InBC. [InBC Investment Corp](#) will manage the fund to support start-ups, help promising companies scale up, and work with a 'triple bottom line' mandate that considers people, the planet and profits.

**Highlights on Carbon Pricing**

On April 1, 2021, [B.C.'s carbon tax rate](#) rose from \$40 to \$45 per tCO<sub>2</sub>e. The rate is scheduled to increase to \$50 per tonne on April 1, 2022. To help provide relief during the COVID-19 pandemic, a previously scheduled increase was postponed in 2020 for one year.



## CLIMATE PREPAREDNESS

**CleanBC Goal:** Identify and prepare for current and future impacts of climate change in order to reduce risks to our communities, businesses, infrastructure and people.

### **Highlights on the Climate Preparedness and Adaptation Strategy**

B.C.'s [draft Climate Preparedness and Adaptation Strategy](#), released in June 2021, builds on the work already underway and takes important steps to help us stay safe and respond effectively to the risks posed by a changing climate. It is informed by the [2019 Preliminary Strategic Climate Risk Assessment](#), which examined some of the greatest risks to B.C. as a result of climate change. The strategy includes actions the Province is taking in 2021 to help prepare for the impacts of climate change and presents a suite of proposed actions for 2022 to 2025, which were open for [public input through summer 2021](#). Actions are grouped into four key pathways:

1. Strengthening our foundations
2. Enhancing community climate resilience
3. Fostering resilient species and ecosystems
4. Advancing a climate-ready economy and infrastructure

### **Highlights on Managing Climate Risk**

The draft Climate Preparedness and Adaptation Strategy [builds on work underway across government](#) to manage climate risks. Actions have been taken over the past year to make our economy and environment more climate ready, including investments of \$90 million through our [StrongerBC](#) plan to reduce wildfire risk, improve roads and highways, conserve wetlands and ecosystems, and support adaptation on farms. Additional actions have included:

- Initiatives that anticipate and adapt to greater water scarcity and changing growing conditions in the agriculture and forestry industries; for example, the Climate Change Informed Species Selection tool used to assess suitability of tree species, and the regional adaptation strategies facilitated through Climate & Agricultural Initiative;
- Making progress on taking climate change into account when designing [transportation infrastructure](#);
- Evaluating the health impacts of wildfire-related air pollution;
- Preliminary analysis of an index to assess population vulnerability to extreme heat;
- Identifying climate risks to drinking water systems;
- Monitoring how climate changes impact the job market; and
- Continuation of a food security task force; and
- Development of a hazard mapping program allowing a more efficient response to climate-related emergencies impacting children in care.

Please see the [Climate Preparedness table](#) for more information.



## PUBLIC SECTOR LEADERSHIP

B.C. public sector organizations (PSOs) are accelerating emissions reductions, taking action to prepare for climate change and increasing the use of low-carbon and renewable materials in infrastructure.

This section highlights actions in the broader public sector (i.e., health authorities, public schools, post-secondary institutions, and Crown corporations) as well as provincial government ministries.

### **Reducing Public Sector Emissions**

#### **Broader Public Sector:**

After first increasing funding to the program in 2020, B.C. further increased funding to the [Carbon Neutral Capital Program \(CNCNCP\)](#) in 2021 by \$6 million to \$56 million per year for two years. This increase will support more projects in K-12 schools. The CNCNCP supports projects such as improved HVAC systems, solar panels and electric vehicle charging stations that save energy and reduce emissions in health care facilities, post-secondary institutions and K-12 schools.

Since the 2020 increase, B.C. has more than tripled support for PSOs through the CNCNCP (\$56 million per year).

The Province has also implemented a new Energy and Emissions Assessment Framework for all major capital projects for PSOs. The framework requires PSOs to include options to reduce greenhouse gas emissions in public sector buildings relative to a baseline of LEED Gold by adopting energy efficiency measures and deploying low carbon heating and cooling systems.

To help reduce transportation emissions, 22 school districts ordered 52 electric school buses in total for 2020/21 and 2021/22. Three districts partnered with the Canada Infrastructure Bank to help finance eight of the buses.

For 2020, after reducing emissions as much as possible, public sector organizations invested \$16.7 million in carbon offsets to achieve carbon neutral operations. These investments support innovative emission reduction projects across the province in the forestry, agriculture, transportation, oil and gas, waste management and clean technology sectors.

#### **Provincial Core Government:**

The [CleanBC Government Buildings Program](#) aims to demonstrate public sector leadership to achieve a low-carbon and climate resilient core-government building portfolio through a triple bottom line approach. As a result, in 2020, the GHG emissions from provincial government buildings were 40% lower than 2010 levels.

The portfolio has made significant progress by:

- Implementing energy retrofits at more than 28 buildings to date, including a net-zero energy showcase building;
- Assessing climate risk impacts at 50 buildings; and
- Installing 121 electric vehicle charging spaces at 47 buildings.



#### **B.C.'S PROVINCIAL PUBLIC SECTOR**

- 2020 Emissions: 716,745 tonnes Mt CO<sub>2</sub>e (included in building sector GHGs)
- Emissions change from 2010: -12%

Each year since 2010, PSOs have achieved [carbon neutral operations](#) – by measuring and reducing emissions as much as possible, reporting on outcomes, and then offsetting remaining emissions by investing in high-quality B.C.-based carbon offset projects.

### 3. Getting Results

In 2020, 34% of applicable provincial government light-duty vehicle purchases were zero emission vehicles, exceeding the 10% ZEV purchase target in CleanBC.

#### ***Climate Ready Public Sector***

Public sector organizations (PSOs) have already experienced the impacts from climate change and are taking action to adapt to a changing climate. The climate-related events that have the greatest impact on public sector facilities, programs or services are extreme heat, extreme storms causing power outages, poor air quality and wildfire. Actions and policies to prepare the public sector for a changing climate are proposed in the draft Climate Preparedness and Adaptation Strategy and build on actions already being taken by PSOs to manage climate risks, including:

- BC Housing, through the [Mobilizing Building Adaptation and Resilience](#) project, and in partnership with Pacific Institute for Climate Solutions and University of British Columbia, is helping develop the Integrated Building Adaptation and Mitigation Assessment framework. BC Housing is currently [piloting the framework](#) on an affordable housing new construction project and will be piloting it on at least three other projects in the next year.
- In December 2020, B.C. health authorities released the [Climate Resilience Guidelines](#) for B.C. health facility planning and design.
- An increasing number of PSOs are including climate adaptation measures in capital projects and have plans to consider climate adaptation in long-term strategic plans.





## 4 | Working Together

The Province continues to work directly with other levels of government, Indigenous leaders and communities, business and industry, environmental and academic partners and others to implement CleanBC. This chapter highlights our engagements from April 2020 to March 2021, some of which were impacted by the COVID-19 pandemic.

### Shared Path with Indigenous Peoples

During the 2020-2021 fiscal year, the Province worked with Indigenous peoples to build stronger partnerships and act on shared climate goals in a number of ways:

- The Province hosted several virtual engagement sessions with individuals from Indigenous Nations and organizations to share input on the Climate Preparedness and Adaptation Strategy, community climate action, sectoral targets, the Forest Carbon Offsets Protocol, the Flood Risk Strategy, Remote Community Clean Energy Strategy, and COVID-19 economic recovery and CleanBC.
- The Province continues to work closely with the First Nations Leadership Council Technical Working Group and the Indigenous Climate Adaptation Technical Working Group, and sought input from Indigenous governments, organizations, and communities to develop a climate preparedness and adaptation strategy that will help us prepare for the impacts of climate change. We're also continuing our work together to develop clean energy infrastructure in remote communities, increase economic opportunities, and provide better access to CleanBC programs including the [Indigenous Community Heat Pump Incentive](#) and the [Indigenous Community Energy Coach Program](#).
- In August of 2020, the Province hosted five virtual sessions to share input on the Climate Preparedness and Adaptation Strategy. 80 individuals from 39 Indigenous Nations and organizations attended, with key themes being Indigenous rights, title, and self determination, capacity and support, ecosystem conservation, water, holistic approaches, Indigenous knowledge and related protocols, data access and management, community engagement, and trauma-informed approaches.
- A detailed summary of engagement can be found in the [Engagement table](#).

## Engaging with Interested Parties

Engagement with interested parties happened throughout all regions of the province on a variety of CleanBC initiatives.

- From April 2020 to March 2021, the Province engaged business and industry on the CleanBC Industry Fund, including proposed scope and design of the program, as well as funding calls and funding agreements.
- In December 2020, the Province sought ideas and feedback on setting sectoral targets from industry, labour, academia, transportation, buildings, business and environmental sectors.
- From summer to winter of 2020, remote communities across B.C. provided feedback on the Remote Community Energy Strategy, including aspirations for the program and current challenges.
- Through spring and summer of 2020, the Province held eight virtual engagement sessions on the development of the Climate Preparedness and Adaptation Strategy with a total of 260 participants who represented youth, federal government, academia, environmental groups, local governments, and industry.
- A detailed summary of engagement can be found in the [Engagement table](#).

## Government Collaboration

- Meeting our 2030 climate targets will create new jobs in a range of sectors that can benefit people across B.C. A workforce readiness framework is being developed to ensure people can adapt and respond to the needs of our future, cleaner economy.
- B.C. continues to work closely with the Government of Canada through the Pan-Canadian Framework to realize the potential of new measures and investments to support greenhouse gas reductions and adaptation.
- The federal government launched its [Healthy Economy, Healthy Environment strategy](#) in December 2020, which builds on the CleanBC plan. The Province has sought federal/provincial/territorial partnerships across the themes of transportation, buildings, communities, industry and climate infrastructure.
- The Province contributes to the development of a National Adaptation Strategy to ensure that the national strategy complements B.C.'s Climate Preparedness and Adaptation Strategy.
- The federal and provincial governments have a shared funding agreement through the [CleanBC Communities Fund](#), and jointly fund the [Forest Carbon Initiative](#) and [Organics Infrastructure Program](#) through the federal Low Carbon Economy Fund.
- The Province continues to partner with the federal government's Investing in Canada Infrastructure Program. Fully leveraged by the Province, TransLink and local governments, this funding will enable investments including SkyTrain expansion and upgrades, bus replacements, smart bus technology and facility improvement and construction.
- The Province will partner with local governments to find new ways to support their work. This will include establishing a new program to support local government climate actions through flexible, predictable funding.

## Climate Solutions Council

The [Climate Solutions Council](#) is an independent advisory council that provides strategic advice to government on climate action and clean economic growth. The Council are key partners in keeping us on track and accountable in our approach to climate action and improving resiliency in British Columbia. The Government of B.C. would like to express sincere gratitude to the Council for their expertise, their time, and their collaboration on difficult and complex topics.

- During their term, the Council provided two end-of-year reports and 14 letters of advice to government on topics ranging from economic stimulus and recovery in response to COVID-19, to closing the gap to the 2030 target, and the Climate Preparedness and Adaptation Strategy. You can read the reports and letters of advice on the [Climate Solutions Council website](#).
- This advice helped to shape government thinking and direction on economic recovery, implementation of CleanBC, the development of the Roadmap to 2030, the Climate Preparedness and Adaptation Strategy, and the Climate Change Accountability Report.



# Appendix 1: CleanBC Initiatives by Sector

Initiative	Description	GHG Mt in 2030
<b>CLEANER TRANSPORTATION</b>		
<b>Bring down the price of clean vehicles</b>	Within 20 years, every new car will be a zero-emission vehicle <ul style="list-style-type: none"> <li>Mandate 100% of new cars to be zero-emission vehicles (ZEVs) by 2040; 30% ZEV by 2030 and 10% ZEV by 2025</li> </ul>	0.6
	Help people to afford cleaner cars and save money on gas bills with EV incentives <ul style="list-style-type: none"> <li>Continue to provide rebates for light-duty vehicles</li> <li>Expand incentives for clean buses and heavy-duty vehicles</li> </ul>	0.2
	Make it easier to charge an electric car or fuel a hydrogen car <ul style="list-style-type: none"> <li>Expand the charging network with home, work and public fast-charging stations and additional hydrogen fueling stations</li> <li>Enable private investment in charging and hydrogen fueling infrastructure to get more stations faster</li> </ul>	
<b>Speed up the switch to cleaner fuels</b>	Phase in more renewable fuels for the gas we use <ul style="list-style-type: none"> <li>Make our fuel cleaner by increasing the carbon intensity requirement of the Low Carbon Fuel Standard to a 20% reduction in average carbon intensity by 2030</li> <li>Increase the supply of cleaner fuels by ramping up new production in B.C. of 650 million litres of renewable gasoline and diesel by 2030</li> </ul>	2.2
	Make vehicles run cleaner by increasing tailpipe emissions standards for vehicles sold after 2025	1.6
<b>Get to work on getting rid of gridlock</b>	Help people get around with a long-term strategy to increase active transportation and look at better commuting solutions	
<b>SUBTOTAL</b>		<b>4.5</b>
<b>IMPROVE WHERE WE LIVE AND WORK</b>		
<b>Better Buildings</b>	Make every building more efficient <ul style="list-style-type: none"> <li>Improve the B.C. Building Code in phases leading up to “net-zero energy ready” by 2032</li> <li>Adopt the model National Energy Code for existing buildings by 2024</li> <li>Increase efficiency standards for heating equipment and windows</li> <li>Encourage the development of innovative and cost-effective low-carbon building solutions</li> </ul>	0.1
<b>Support for Better Buildings</b>	Focused investments in public housing to use less energy at home <ul style="list-style-type: none"> <li>\$1.1 B for Capital Renewal fund for public housing to improve living conditions, energy efficiency, and reduce emissions</li> <li>Incentives to make heat pumps affordable and make homes more comfortable through building envelope upgrades</li> <li>Retrofits for public buildings so they use less energy</li> <li>Improve building energy information available to buyers and renters</li> </ul>	
	Make residential natural gas consumption cleaner by putting in place a minimum requirement of 15% to come from renewable gas	1.9
<b>Support for Communities</b>	Help remote communities reduce their dependence on diesel Support public infrastructure efficiency upgrades and fuel switching to biofuels with the CleanBC Communities Fund	
<b>SUBTOTAL</b>		<b>2.0</b>

Initiative	Description	GHG Mt in 2030
<b>CLEANER INDUSTRY</b>		
<b>Ramp up the CleanBC Program for Industry</b>	Direct a portion of B.C.'s carbon tax paid by industry into incentives for cleaner operations	2.5
<b>Improve air quality by cutting air pollution</b>	Clean up air pollution in the Lower Mainland with a pilot project to test options to switch 1,700 freight trucks to natural gas and low or zero-carbon fuel by 2030 Make heavy-duty vehicles more efficient with fuel efficiency improvements, education on best driving practices	
<b>Reduce emissions of methane</b>	Reduce methane emissions from upstream oil and gas operations by 45%	1.4
<b>Industrial electrification</b>	Provide clean electricity to planned natural gas production in the Peace region Increase access to clean electricity for large operations with new transmission lines and interconnectivity to existing lines	1.1
<b>Carbon Capture and Storage</b>	Ensure a regulatory framework for safe and effective underground CO <sub>2</sub> storage and direct air capture	0.2
<b>Cleaner fuels for industry</b>	Make industrial natural gas consumption cleaner with a minimum 15% to come from renewable gas	1.3
<b>SUBTOTAL</b>		<b>6.4</b>
<b>REDUCE WASTE</b>		
<b>Reduce waste and turn it into a clean resource</b>	Help communities to achieve 95% organic waste diversion for municipal waste – including systems in place to capture 75% of landfill gas Waste less and make better use of it across all sectors of our economy, like forestry, agriculture, and residential areas, including renewing the B.C. Bioenergy Strategy and building out the bioenergy and biofuels cluster	0.7
<b>SUBTOTAL</b>		<b>0.7</b>
<b>HELPING PEOPLE GET THE SKILLS THEY NEED</b>		
<b>Make sure British Columbians can lead the clean transition</b>	Develop programs like Energy Step Code training and certification, and Certified Retrofit Professional accreditation Expand job training for electric and other zero-emission vehicles	
<b>MEASURING OUR PROGRESS</b>		
<b>Establish credible targets and a strategy to meet them</b>	Roll-out associated programs and enabling legislation for CleanBC	
<b>Stay accountable</b>	Coordinate implementation and reporting for CleanBC as outlined in the <i>Climate Change Accountability Act</i>	
<b>PUTTING A PRICE ON POLLUTION</b>		
<b>Carbon pricing</b>	Increase the carbon tax to encourage lower emission alternatives, with rebates for low- and middle-income British Columbians and support for clean investments	0.9
<b>SUBTOTAL</b>		<b>0.9</b>
<b>2030 CLEANBC TOTAL REDUCTIONS<sup>11</sup></b>		<b>12.2</b>

<sup>11</sup> Individual pathway reductions do not add up to the totals because of interaction effects between policies that target the same emissions.

# Appendix 2: List of B.C. Indicators

Category	Indicator	Measure	Historical	Previous Year	Most Recent	% Change from Historical	% Change from Previous Year	Period
<b>Economic Transition</b>	GHG intensity of the economy	tCO <sub>2</sub> e/\$million GDP	314	259	253	-19%	-2%	2007-2019
	GHG emissions per person	tCO <sub>2</sub> e/British Columbian	15.3	13.7	13.5	-12%	-1%	2007-2019
	Provincial GHG emissions (gross)	Million tCO <sub>2</sub> e	65.7	68.5	68.6	+5%	+0%	2007-2019
<b>Transportation</b>	Electric vehicle sales	Percentage of ZEV as a proportion of light-duty vehicle sales	0%	8.7% <sup>1</sup>	9.4%	+19,000%	+8%	2011-2020
	Electric vehicle registrations	Light-duty ZEVs registered in B.C.	97	36,468	54,469	+37,496%	+49%	2011-2020
	Charging stations	Percentage of 2040 public fast charging requirements complete <sup>2</sup>	1%	5%	7%	+493%	+49%	2016-2020
	Renewable fuel content <sup>3</sup>	Percent renewable content in transportation fuels	0.5%	6.7%	7.8%	+1,460%	+16%	2001-2019
	Renewable fuel supply <sup>3</sup>	Million litres of biofuel supplied	38.2	600.5	676.2	+1,670%	+13%	2001-2019
	Annual public transit ridership	Average number of transit trips taken per British Columbian	51	64	24 <sup>4</sup>	-58%	-63%	2007-2020
	<b>Buildings</b>	Residential heat pumps	Percentage of households with heat pumps as primary or secondary heating	3%	10%	7%	+180%	-28% <sup>5</sup>
Better Homes and Better Buildings fuel-switching projects		Lifetime million gigajoules of natural gas expected to be displaced from approved CleanBC fuel-switching projects	2.2	1.6	2.2	+1%	+38%	2019-2021
Clean electricity		Percentage of households that use clean electricity as primary heating	36%	Not available	41%	+14%	Not available	2007-2020
Energy intensity of residential buildings		Gigajoules of energy use per square-metre of floorspace for residential buildings	0.7	0.6	0.5	-28%	-7%	2007-2018
Energy intensity of commercial buildings		Gigajoules of energy use per square-metre of floorspace for commercial buildings	1.3	1.1	1.1	-14%	+1%	2007-2018
Energy intensity of affordable housing		Gigajoules of energy use per square-metre of floorspace for provincially-owned affordable housing stock	0.8	Not available	0.7	-13%	Not available	2010-2020

Category	Indicator	Measure	Historical	Previous Year	Most Recent	% Change from Historical	% Change from Previous Year	Period
Waste	Municipal solid waste disposal	Kilograms of waste disposed per British Columbian	703	505	501	-32%	-1%	2007-2019
	Organic waste	Percent of population covered by an organic waste restriction	3	67	74	+2,142%	+10%	2007-2020
Industry	GHGs from industry	Million tCO <sub>2</sub> e from large industrial reporters in British Columbia <sup>6</sup>	19.2	19.0	17.7	-8%	-7%	2012-2020
	Industry investment to reduce GHGs	Millions committed by industry to emission reduction projects through the CleanBC Industry Fund	\$39	\$39 <sup>7</sup>	\$49	+26%	+26%	2019-2020
	Methane emissions from oil and gas	Million tCO <sub>2</sub> e of fugitive and vented methane emissions reported from the upstream oil and gas sector <sup>8</sup>	2.1	1.9	1.9	-12%	-3%	2014-2019
Public Sector	GHGs from B.C. Public Sector	Kilotonnes of CO <sub>2</sub> e reported by the B.C. Public Sector	816	762	717	-12%	-6%	2010-2020
	Progress to reduce building emissions by 50% from baseline	Kilotonnes of CO <sub>2</sub> e from public sector buildings (weather-normalized) <sup>9</sup>	660	556	561	-15%	+1%	2010-2020
	Progress to reduce fleet emissions by 40% from baseline	Kilotonnes of CO <sub>2</sub> e from public sector fleets	154	163	143	-7%	-12%	2010-2020

## Notes:

- <sup>1</sup> The indicator for electric vehicle sales was revised upward from 8.6% in last year's Climate Change Accountability Report due to improvements in the data.
- <sup>2</sup> Estimated based on the number of completed stations versus forecast needs for 2040.
- <sup>3</sup> Indicators for renewable fuel supply and renewable fuel content were updated this year to reflect conditions prior to the introduction of the Renewable & Low Carbon Fuel Requirements Regulation in 2010.
- <sup>4</sup> Reflects lower transit trips in Fiscal Year 2020-21 due to impacts of COVID-19 pandemic.
- <sup>5</sup> This reduction may be overstated as a result of changes in BC Hydro's Residential End Use Survey methodology, and to inconsistencies resulting from multiple data sources.
- <sup>6</sup> Industrial emissions data collected under the *Greenhouse Gas Industrial Reporting and Control Act* (GGIRCA) differs slightly from last year's Climate Change Accountability Report due to a process of continuous improvement.
- <sup>7</sup> The CleanBC Industry Fund was implemented in 2019 and thus the previous year also represents the historical year.
- <sup>8</sup> Venting and Fugitive methane emissions data collected under GGIRCA differs slightly from last year's Climate Change Accountability Report due to data improvements, including removing natural gas distribution emissions in each year as they are not an upstream source.
- <sup>9</sup> Building emissions are weather-normalized to account for each year's weather impact on heating and cooling demand.

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