

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE  
MEETING OF WEDNESDAY, SEPTEMBER 27, 2023**

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**SUBJECT**    2022 Regional Greenhouse Gas Inventory

**ISSUE SUMMARY**

To provide the results of the 2022 Capital Regional District (CRD) regional and local government community greenhouse gas (GHG) emission inventories.

**BACKGROUND**

The CRD's 2018 Regional Growth Strategy (RGS) targets a reduction in community GHG emissions of 61% by 2038. In October 2021, the CRD Board approved the CRD Climate Action Strategy, which included a commitment to deliver a biennial regional GHG inventory. Utilizing the internationally recognized Global Protocol for Cities (GPC) BASIC + framework, the CRD retained Stantec Consulting Ltd. to update the CRD regional and local government emission inventories for the 2022 calendar year (see Appendices A and B).

**Results**

The 2022 CRD inventory indicates that the capital region emitted approximately 1.86 million tonnes of CO<sub>2</sub>e. Carbon pollution in 2022 was 7% below the 2007 baseline and increased approximately 1%, compared to the 2020 inventory. This trend varies between the region's municipalities and electoral area inventories (Appendix B). On a per capita basis, emissions have decreased by 25% since 2007, which again, varies by community across the region (see Appendix C).

In 2022, on-road regional transportation related emissions accounted for approximately 42% of all carbon pollution. In conjunction with the increase in electric vehicles in the region, the region's on-road transportation-related carbon pollution was down approximately 12% from 2007 but increased approximately 11% over 2020. This is partly due to the COVID-19 pandemic recovery.

Natural gas use in buildings, which accounted for the majority of building carbon pollution in the region, continued to increase in 2022 at almost 10% above 2020 levels. Despite the substantial increase in natural gas use in 2022, the 2022 CRD inventory observed a reduction from buildings in the region of approximately 7% below 2007, as a result of heating oil use reductions and the continued greening of the BC electricity grid. Trends for propane and wood carbon pollution continued to be estimated using provincial estimates for the baseline year and annual adjustments using linear regression methods.

Waste-related carbon pollution was observed to be approximately 61.4% below 2007 levels, thanks to ongoing work at the Hartland Landfill to capture landfill gas and the new commissioning of the McLoughlin Wastewater Treatment Plant in December 2020.

This inventory represents the best available information and includes four notable updates, including:

- best available emission factor for electricity for each inventory year
- a new method for tracking heating oil use to better reflect building owners retrofitting in favor of other fuel types (including electricity and natural gas)

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- modelled on-road transportation data (due to lack of vehicle-kilometre travelled [VKT] data) was adjusted using the travel pattern results from 2022 CRD Origin Destination Household Travel Survey
- changes to the estimates in the national inventory affecting emissions assumed to be coming from Other Stationary Combustion, such as those associated with agriculture and fishing, required previous inventories to be updated

As with the 2020 CRD inventory, due to limitations in how to quantify GHG emissions from sequestration and land use change, these values have been excluded from the calculation of total emissions for the 2022 CRD inventory. Values for these items are disclosed for information only in the CRD and regional local government community GHG emissions inventory reports.

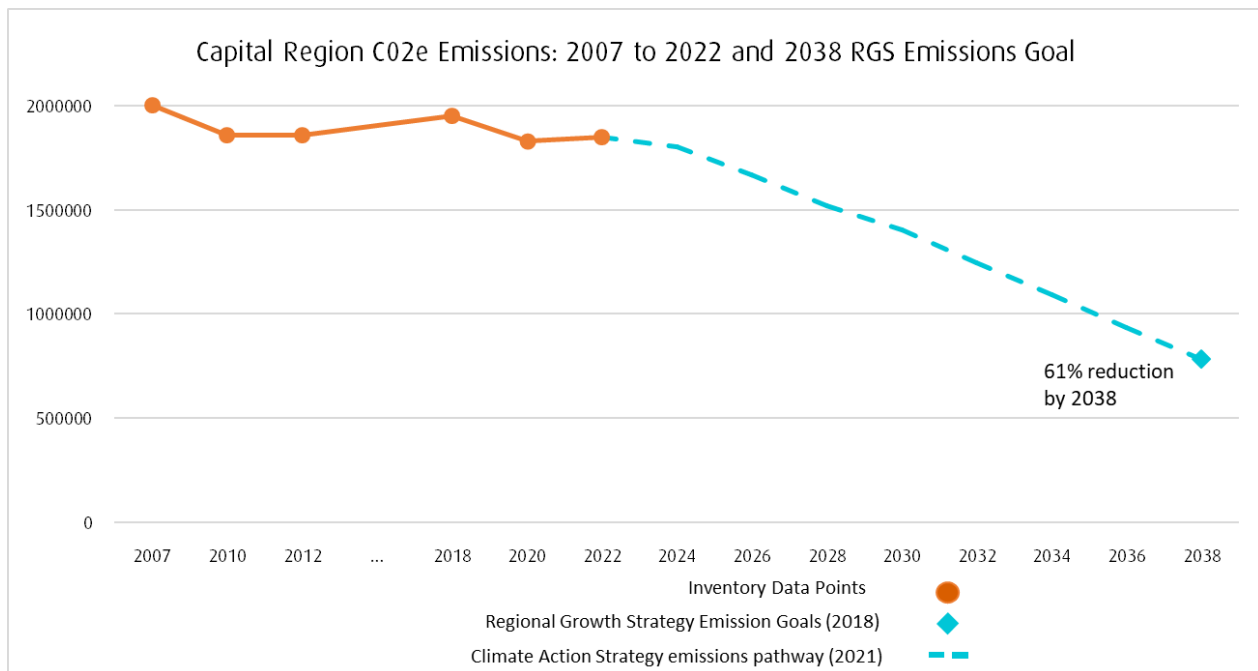


Figure 1: Capital Region Greenhouse Gas Global Protocol for Cities Basic + Emissions and 2038 Regional Growth Strategy (RGS) Goal

### Summary and Next Steps

Carbon pollution in the region remains persistent and significant work remains for the region to meet its 2038 target. Together, building and transportation-related carbon pollution continue to be the largest sources of the region's carbon pollution in 2022 (approximately 75%). To achieve regional emissions targets, the natural gas use trend must reverse, and the transition to zero-emission transportation must accelerate while protecting and conserving ecosystem health and improving our region's resilience.

Staff will review results and methodology details of these inventories with staff and elected officials on the CRD Climate Action Inter-Municipal Working Group (IMWG) and Task Force and continue to work on collaborative climate action initiatives. Of note, the province has indicated that they may release revised Community Energy and Emissions Inventories (CEEs) for local governments later this year. The last CEEs were released in 2012. It is anticipated that methodologies used may differ from that of the CRD, and therefore may have different results. Once released, staff will review the methodology and share differences with the Climate Action IMWG.

**CONCLUSION**

The CRD completes regional and local government greenhouse gas emission inventories every two years. Results for the regional inventory for the 2022 calendar year indicate an approximate 7% decrease in regional emissions from 2007 to 2022, and a 1% increase from 2020. This trend varies between the municipalities and electoral areas within the capital region. The analyses also indicate that carbon pollution in the region remains persistent and significant work remains for the region to meet its 2038 emissions target. The CRD, through the regional climate action service, will continue to work with local governments to advance collaborative climate action initiatives.

**RECOMMENDATION**

There is no recommendation. This report is for information only.

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**ATTACHMENTS**

- Appendix A: Capital Regional District 2022 GPC BASIC+ Community Greenhouse Gas Emissions Inventory Report – Stantec Consulting Ltd. – September 14, 2023
- Appendix B: Capital Regional District – Municipalities and Electoral Areas – 2007 Base Year and 2022 Reporting Year Energy & Greenhouse Gas Emissions Inventory – Stantec Consulting Ltd. – September 14, 2023
- Appendix C: Capital Region CO<sub>2e</sub> Emissions Per Capita – September 2023