

ADDRESSING METRO 2050 COMPLEXITIES WITH PROPOSED SOLUTIONS

METRO 2050 PROBLEM & SOLUTION SUMMARY

Metro Vancouver Board will consider adoption of a new Regional Growth Strategy at an April 20, 2022 public hearing. While *Metro 2050's vision and goals* set sight on a prosperous, low carbon, resilient destination, the *strategies and policies* keep the region on course for a high carbon, high congestion, high cost, high risk future.

In the wake of multiple, multibillion-dollar climate catastrophes, Renewable Cities has been engaging with Metro Vancouver to support a course correction on its new land use agenda.

Auto-oriented land use has been a major driver of the region's largest and fastest growing source of carbon: transportation, comprising 47 per cent of total GHGs. According to Metro Vancouver, "no changes have been made to the location of any of the land use designations"—the fundamental policy determinants that underpin carbon, congestion and resilience to climate change impacts.

Metro projects 6,500 hectares of growth in "low density housing with some higher density" in existing forest, farmland and natural areas far from jobs. This growth is equivalent to an average municipality in area, increasing the urban footprint 8%. Using Metro assumptions, Renewable Cities projects big impacts from this growth alone:

	Metro Driving & Congestion	Passenger Transportation GHGs	Urban Tree Canopy
Trends	additional 1 billion km of driving per year	+5% – one quarter million tonnes of additional CO2 per year –	– 10% loss (3,000 hectare) by 2040 – – cut coverage within <i>Urban Containment Boundary</i> to 28% from 32% by 2040 – – releasing up to 1.5 million tonnes of CO2–
Targets	Metro Goal: Reduce congestion CleanBC Target: reduce driving km 25% km by 2030	Metro Target: 60% reduction by 2030	Metro Target: Increase UCB canopy coverage from 32% to 40% by 2050

Urban tree canopy loss increases stormwater management costs, vulnerability to flooding and heat wave events and loss in ecosystem health and forest carbon – impacts experienced by many communities across B.C. last year.

Because low density development doesn't generate enough revenue to operate, maintain and replace its civic infrastructure, this growth will also increase civic infrastructure deficits, transferring the tax burden along with climate costs to future generations.

Metro Vancouver Board has acknowledged the RGS's inadequacy and commendably proposed a companion resolution to swiftly amend *Metro 2050* to deliver on its climate commitments. Renewable Cities has underscored to be successful; this work must not focus exclusively on carbon but consider systemic solutions to complex problems that afford win-win-win opportunities across the region.

It is through this process that municipalities across Metro Vancouver, including City of Surrey, can reconcile their shared vision with shared strategies. Provincial engagement will be critical in hurdling challenging policy barriers.

Land use planning is local governments' primary sphere of influence for climate action, according to the Intergovernmental Panel on Climate Change. It is also the lowest cost GHG reduction strategy wedge with the greatest potential to advance complementary priorities: affordability, civic infrastructure deficit management, congestion management, economic productivity and resilience to climate impacts.

LAND USE: CORNERSTONE FOR ACTION ON CLIMATE, CONGESTION, ECONOMY, AFFORDABILITY

In the wake of multiple, multi-billion-dollar climate catastrophes, Renewable Cities has been engaging with Metro Vancouver to support a course correction on its new land use agenda, [Metro 2050](#). The Intergovernmental Panel on Climate Change underscores urban land use is the most important local government arena of action. According to the IPCC, OECD, and Global Commission on the Economy and Climate, sustainable land use is the lowest cost GHG reduction strategy wedge with the greatest potential to advance complementary priorities: affordability, civic infrastructure deficit management, congestion management, economic productivity, and public health.

Here are some highlights from the IPCC findings:

“Sustainable urban planning and infrastructure design including green roofs and facades, networks of parks and open spaces, management of urban forests and wetlands, urban agriculture, and water-sensitive design can deliver both mitigation and adaptation benefits in settlements. These options can also reduce flood risks, pressure on urban sewer systems, urban heat island effects, and can deliver health benefits from reduced air pollution. There could also be trade-offs. For example, increasing urban density to reduce travel demand, could imply high vulnerability to heat waves and flooding.” IPCC, Assessment Report Six, Mitigation Working Group, 2022

“Effective urban planning can reduce GHG emissions from urban transport between 20% and 50%” IPCC, Special Report on Global Warming of 1.5°C, 2018

“Thousands of cities are undertaking climate action plans, but their aggregate impact on urban emissions is uncertain... Current climate action plans focus largely on energy efficiency. Fewer climate action plans consider land use planning... Effective mitigation strategies involve packages of mutually reinforcing policies, including co-locating high residential with high employment densities, achieving high diversity and integration of land uses, increasing accessibility and investing in public transport...” IPCC, Assessment Report Five, Mitigation Working Group, 2014

METRO 2050: DRIVING GROWTH IN CARBON, CONGESTION & CLIMATE VULNERABILITY

Auto-oriented land use has been a major driver of the region’s largest and fastest growing source of carbon, namely transportation, which comprises 47 per cent of total GHGs. According to a [Metro Vancouver summary of the Regional Growth Strategy](#), “no changes have been made to the location of any of the land use designations”—namely, the fundamental policy determinants that underpin carbon, congestion and resilience to climate change impacts.

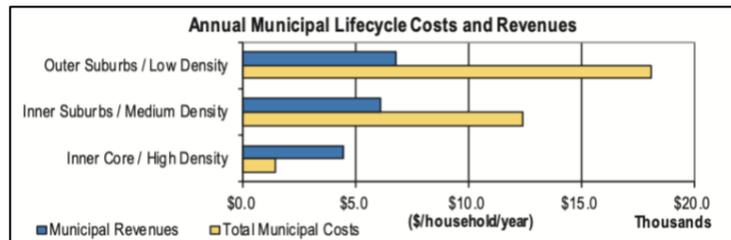
Metro Vancouver has goals to cut passenger transportation GHGs 60 per cent by 2030, reduce congestion and increase the urban forest canopy. However, a [Metro Vancouver study of regional tree canopy trends](#) projects 6,500 hectares of growth in “low density housing with some higher density” over the next 15-20 years in existing forest, farmland and natural areas far from jobs. Using Metro Vancouver assumptions and studies, Renewable Cities estimates the implications of this development will wipe out the prospect of delivering on these goals and almost certainly wipe out provincial government climate targets.

Projected peripheral growth into 6,500 hectares of natural areas increases the region’s urban footprint by 8% and is equivalent to an average municipality in size, e.g., half a City of Vancouver, one West Vancouver, two Port Moody, four New Westminsters or five City of North Vancouver.

The location and form of growth has three implications:

- 1. Increased Transportation Carbon & Congestion:** Increase passenger vehicle GHGs by 5 per cent versus contributing to a targeted 60 per cent reduction and add an estimated one billion km of driving per year on Metro Vancouver roads, undermining a *Metro 2050* commitment to reduce congestion and a provincial target to reduce driving kilometres 25 per cent by 2030.

2. **Loss of Urban Tree Canopy & Climate Resilience:** Remove 10% of tree canopy within the Urban Containment Boundary, wiping out the prospect of meeting Metro Vancouver’s target of increasing coverage from 32 to 40 per cent of the UCB and releasing 1.5 million tonnes of CO2. **The implications include increased stormwater management costs, vulnerability to flooding and heat wave events, and sustained decline in ecosystem health, biodiversity and terrestrial carbon. Forest loss factored in last year’s floods and 600 heat wave mortalities.**
3. **Increased Civic Infrastructure Deficits & Intergenerational Inequity:** Because low density development doesn't generate enough revenue to operate, maintain and replace its civic infrastructure, this will increase civic infrastructure deficits. **This is a significant additional burden on future taxpayers, further exacerbating one of the greatest inequities of our time: intergenerational inequity. Young people today will not only confront greater climate change impacts, under current policy, affordability, congestion and taxpayer burden will grow and public services will decline. Young, disadvantaged populations will be more adversely impacted.**



Annualized Infrastructure Costs & Revenues by sample Neighbourhood Type (BC Ministry of Municipal Affairs)

	Metro Driving & Congestion*	Passenger Transportation GHGs	Urban Tree Canopy**
Trends	– additional 1 billion km of driving per year by 2040 – (650,000 km by 2030)	– +5.25% by 2040– – a quarter million additional tonnes of CO2 per year – (4.66% by 2030)	– 10% loss (3,000 hectare) by 2040 – – releasing up to 1.5 million tonnes of CO2 – – cut coverage within <i>Urban Containment Boundary</i> to 28% from 32% by 2040 –
Targets	<i>Metro Goal:</i> Reduce congestion <i>CleanBC Target:</i> reduce driving km 25% km by 2030	<i>Metro Target:</i> 60% reduction by 2030	<i>Metro Target:</i> Increase UCB canopy coverage from 32% to 40% by 2050

To contextualize projected GHG growth, Metro is targeting a 45% reduction from its 2010 GHGs of 14¼ million tonnes. This target replaces a missed 33% reduction target from 2007 levels by 2020. GHGs have risen to 16 million tonnes in 2020. This projected growth due to policy across Metro can’t be reconciled with these targets. Transportation is the largest and fastest growing GHG sector, powerfully fueled by car-oriented urban growth in peripheral areas. Due to auto oriented growth, there will be more fossil fuel vehicles on Metro roads in 2030 than 2020 or 2010.

*One billion km is equivalent to adding 100% of driving originating from Langley Township, Burnaby OR Richmond, based on [TransLink’s most recent trip diary](#).

**Forest carbon loss is conservatively based on an assumption of [average carbon stored and annually sequestered in average urban tree canopy across US and Canada](#). Other assumptions and references are [detailed in a Renewable Cities letter to Metro Vancouver Board](#).

While there are Metro 2050 policies that encourage a form of growth in locations that can help drive carbon and congestion reductions, these policies are inadequate to offset these impacts and deliver on Metro targets.

COURSE CORRECTION OBSTACLES

Metro Vancouver's board is overwhelming sincere in its commitment to tackle climate change. There are, however, multiple, mutually reinforcing obstacles to a major course correction:

- **Unsustainable land use policy preference:** Provincial policy governing municipalities makes unsustainable land use attractive and easy despite the long-term negative results: fiscally, economically, socially and environmentally. This is reinforced by diverse policies municipally and federally.
- **Inadequate infrastructure spending performance standards:** Transportation infrastructure projects costing billions of dollars (roads *and* transit) are spent locally every year by all orders of government across B.C. NONE of this spending is driven by meaningful performance requirements: mode shifting, congestion management, transit ridership, value for dollar, carbon, flood and heat wave resilience... We are delivering on the results we are targeting: nothing!
- **Antiquated governance:** The province legislatively requires Regional Districts to have unanimity (100 per cent support!) across all member municipalities to adopt a Regional Growth Strategy, meaning change currently happens at the speed of the member with the least adequate policy. In the absence of performance objectives, this an insurmountable requirement for a major course correction.
- **Inadequate policy integration:** Well-intentioned policies in one department collide with policies in other departments. Big transit projects funded by infrastructure departments at all orders of government drive the displacement of affordable, purpose-built rental housing, the loss of forest and farmland, and growth in congestion and carbon while policies in other departments at all orders aim to reverse these trends. Good land use enables all these priorities to be cost-effectively advanced, often at negative cost, i.e. profitably.

COURSE CORRECTION IMPERATIVES

Action on two complementary imperatives can steward a course correction and hurdle these obstacles:

- **Metro 2050 Early Amendment on Climate Action:** Metro Vancouver's Regional Planning Committee has tabled a companion resolution to the *Metro 2050* bylaw to develop a work plan that will support the next Board, appointed after the November election, to rapidly amend *Metro 2050*. Renewable Cities has underscored that this work, to be successful, must not focus exclusively on climate but consider systemic solutions to complex problems that afford win-win-win opportunities across the region, addressing affordability, congestion, resilience to climate impacts, and civic infrastructure deficits.
- **CleanBC Roadmap Implementation:** The B.C. Government has recognized that sustainable land use is essential to deliver on its 2030 targets. Over the next 18 months it will generate Climate Lenses for Official Community Plans and Regional Growth Strategies, evaluate opportunities for amending the Local Government Act, and develop a Clean Transportation Plan that includes integrated land use to deliver on its targets:
 - Cutting driving km 25% by 2030 from 2020
 - Increasing the share of walking, cycling and transit trips to 30% by 2030
 - Reducing transportation GHGs by 27% to 32% from 2007

Bold leadership and policy innovation by elected officials and staff can chart a course, maximizing benefits and minimizing costs. The best course will not just benefit the climate, but the pocketbooks and prosperity of taxpayers.

SIX BIG MOVES: WIN-WIN-WIN OPPORTUNITIES

Metro climate agenda is built on *big moves*. None exist for land use – local governments' paramount authority! In a [letter and presentation to Metro Vancouver Board](#), Renewable Cities detailed six that each and every municipality, its residents, businesses and taxpayers and the region would benefit from environmentally, socially and economically.

1. **Housing & Commercial Transit Hubs**, stacking 1000s of affordable housing units atop rapid transit stations and bus exchanges, generating ridership and farebox and rental revenue for TransLink. Zero long term, taxpayer cost!
2. **SkyTrain Connected Freight Consolidation Centres & Zero Emission Courier Vehicles**, stemming the fastest growing source of carbon and congestion.
3. **Industrial Land Protection & Intensification**, practically implementing municipal and Metro policy, catching up to competing ports and embracing the region’s lost practice of multi-storey industrial construction
4. **General Urban Resiliency & Gentle Intensification**, expanding the number of units permissible in single family neighbourhoods where the fastest growing household is one person occupancy.
5. **Frequent Transit Corridor Focused Growth**, amongst the slowest growing fabric in the region is frequent transit corridors. Focussing growth – even modest – puts riders and revenue into transit, cutting congestion and carbon.
6. **Greenspace Protection**, phasing out development on farm, forest and environmentally sensitive land far from jobs and transit, driving infrastructure deficits, congestion, carbon, intergenerational inequity and vulnerability.

RECONCILING SURREY & METRO DIFFERENCES: ALIGNING SHARED VISIONS WITH SHARED STRATEGIES

The City of Surrey has indicated it will not accept the new Regional Growth Strategy. This is a peculiar twist in *Metro 2050’s* journey of as it was designed to meet the minimum ambitions across all member municipalities. Across Metro Vancouver, Surrey has, in fact, articulated amongst the most ambitious commitments.

[Surrey’s Official Community Plan](#) embodies the goal of its Sustainability Charter: “meet the needs of the present generation in terms of socio-cultural systems, the economy and the environment, while promoting a high quality of life but without compromising the ability of future generations to meet their own needs.”

Surrey has nine “Building Blocks” in its Vision “that inform the policies within its OCP and serve as the guide by which the effectiveness of the OCP will be measured and monitored,” specifically: “The City of Surrey will continually become a greener, more complete, more compact and connected community that is resilient, safer, inclusive, healthier and more beautiful.” From urban tree canopy to efficient transportation and land use, to climate impact preparedness and fiscal responsibility, Surrey’s goals are at least as ambitious as *Metro 2050*.

Surrey’s belief that Metro 2050 is inconsistent with its OCP is erroneous. The City of Surrey and Metro Vancouver share a meritorious vision. They both also have policies and plans that cannot deliver on a shared vision and goals that are in the best interest of current and future citizens, businesses and taxpayers.

An overwhelming majority of the Metro Vancouver Board has indicated an intention to reconcile its vision with its strategy early in the next term. Optimistically, the City of Surrey will join other municipalities in this exercise. Surrey citizens, businesses and taxpayers, indeed, would benefit most.

Ultimately, a new Region Growth Strategy requires unanimity to enter into force. Ideally, the Regional Growth Strategy is accepted by resolution by each affected municipality, including Surrey. There are mechanisms under the [Local Government Act](#) for settling differences that may exist.

Further Metro 2050 Information and Critical Analysis

- Renewable Cities *Metro 2050* Analysis, including references and assumptions for essential analysis: <https://www.renewablecities.ca/updates/metro-2050-course-correction-win-win-win-solutions>
- *Metro 2050* Draft Regional Growth Strategy: <http://www.metrovancouver.org/metro2050>