

CARBON PRICE

Effective Date: June 23, 2017

Approved By: MVRD Board

Policy No. GV-015

PURPOSE

To establish a price on Applicable Greenhouse Gas (GHG) Emissions, and to enable the value of those GHG emissions to be incorporated into Life Cycle Cost Analyses for Metro Vancouver projects or initiatives.

The objectives of the *Carbon Price Policy* are to:

- Incorporate consideration of climate change mitigation (i.e., GHG emissions reduction) into options analyses for all Metro Vancouver projects or initiatives; and
- Provide a mechanism to reduce financial risk of increased operating costs associated with rising external carbon taxes over the lifetime of a Metro Vancouver project or initiative.

DEFINITIONS

“Applicable Greenhouse Gas (GHG) Emissions” are GHG emissions associated with Metro Vancouver projects or initiatives, in particular GHG emissions related to energy use and utility processes, and GHG emissions reductions (or avoided GHG emissions) related to ecological carbon storage/sequestration;

“Carbon dioxide equivalent (CO₂e)” is the common metric used to quantify and compare different types of GHG emissions, and is expressed in tonnes;

“Carbon Price” is the total dollar value (including any provincial and federal carbon taxes) assigned by Metro Vancouver to one tonne of CO₂e; and

“Life Cycle Cost Analysis” is the process to establish the net present value of all costs and revenues associated with a Metro Vancouver project or initiative over its expected life.

POLICY

When undertaking options analysis for a Metro Vancouver project or initiative, the Carbon Price will be used to calculate the value (expressed as a cost) of Applicable GHG Emissions associated with each option. This value will be included in the Life Cycle Cost Analysis for each option.

Carbon Price

Metro Vancouver will use a total Carbon Price (inclusive of any applicable external carbon taxes) of \$150 per tonne of CO₂e in Life Cycle Cost Analyses.

BOARD POLICY

Financial Services, in coordination with the Air Quality and Climate Change Division, will develop and annually review a *Carbon Price Schedule*. This *Carbon Price Schedule* will provide the incremental cost per unit of purchased energy (e.g., litres of gasoline, GJ of natural gas), as well as the cost per unit of other Applicable GHGs (e.g., tonne of fugitive methane). The carbon price will be adjusted to account for any changes to provincial and federal carbon taxes, to ensure that the total carbon price per tonne of Applicable GHGs is constant at \$150 per tonne of CO₂e.

Application

This Policy applies to all options analyses that use Life Cycle Cost Analysis for Metro Vancouver projects or initiatives, including (but not limited to):

- Planning, design, procurement, construction, operation, maintenance, and decommissioning (where applicable) of facilities, vehicles, and equipment owned or operated by Metro Vancouver or by third parties on Metro Vancouver's behalf;
- Acquisition of park land, where protection of the land by Metro Vancouver results in quantifiable GHG emissions reductions compared to business as usual; and
- Management of process emissions from Metro Vancouver facilities.

The Carbon Price will be used to calculate the value of Applicable GHG Emissions associated with:

- Energy purchased by Metro Vancouver or by third parties on Metro Vancouver's behalf for the operation of utilities, fleet, and facilities (including natural gas, liquid petroleum products, propane, and electricity);
- Fugitive methane and nitrous oxide emissions released from wastewater treatment processes and municipal solid waste management processes;
- Avoided GHG emissions due to the displacement of fossil fuels with energy recovered from Metro Vancouver facilities;
- Avoided GHG emissions attributable to the protection and/or restoration of park land such as forests and bogs; and
- Other sources related to Metro Vancouver's activities.

CARBON PRICE SCHEDULE

Version 1.0: May 17, 2017

Background

This Carbon Price Schedule provides data and information in support of the implementation of Metro Vancouver's *Carbon Price Policy*.

In accordance with the *Carbon Price Policy*, Financial Services, in coordination with the Air Quality and Climate Change Division, will annually review the Carbon Price Schedule. The incremental costs will be adjusted to account for any changes to external carbon taxes, to ensure that the total Metro Vancouver Carbon Price is constant at \$150 per tonne of CO₂e on applicable emissions.

Carbon Price Schedule

This Carbon Price Schedule provides the incremental cost per tonne of carbon dioxide equivalent emissions (Table 1).

The BC Carbon Tax (currently set at \$30 per tonne CO₂e) is included in the purchase price of fossil fuels within the province. The fuels that are most relevant to Metro Vancouver projects and initiatives are gasoline, natural gas, diesel and propane. The Government of Canada's "Pan-Canadian Framework on Clean Growth and Climate Change" outlines a pathway for an increasing price on carbon¹. This may result in increases to the BC Carbon Tax to \$40 per tonne CO₂e in 2021 and to \$50 per tonne CO₂e in 2022. The Total Metro Vancouver Carbon Price will comprise the sum of the external BC Carbon Tax and an Incremental Metro Vancouver Carbon Price. If the BC Carbon Tax is increased in response to federal carbon price policy, the Incremental Metro Vancouver Carbon Price will be adjusted to maintain the Total Metro Vancouver Carbon Price at \$150 per tonne CO₂e. Table 1 demonstrates this process.

Table 1. Carbon Price for Metro Vancouver, accounting for External Carbon Taxes

Year	Confirmed BC Carbon Tax	Proposed Carbon Price (Pan-Canadian Framework)	Incremental Metro Vancouver Carbon Price for Life Cycle Costs Analysis	TOTAL Metro Vancouver Carbon Price
2017	\$30	-	\$120	\$150
2018	\$30	\$10	\$120	\$150
2019	\$30	\$20	\$120	\$150
2020	\$30	\$30	\$120	\$150
2021	\$30	\$40	\$120	\$150
2022	\$30	\$50	\$120	\$150
Future	\$30	\$50	\$120	\$150

¹ Government of Canada, 2016. "Pan-Canadian Framework on Clean Growth and Climate Change". Available at: <https://www.canada.ca/en/services/environment/weather/climatechange/pan-canadian-framework.html>