

# **FINANCIAL INFORMATION NOTE**

**Preliminary estimates of cost and revenue projections  
for the REM project (Réseau électrique métropolitain)**

**January 2017**

This document presents estimates of cost and revenue projections expected for the REM project. The figures presented are based on ridership data incorporating the three downtown stations added on November 25, 2016.

These estimates and calculations will continue to be adjusted over the months to come as discussions with the ARTM transition committee continue. The data is still being optimized and the final financial structure will depend on a number of factors, including the terms of governments' participations, the final agreement with the ARTM, and the outcome of the calls for tenders. The figures and parameters presented in this document are therefore communicated on a preliminary and indicative basis.

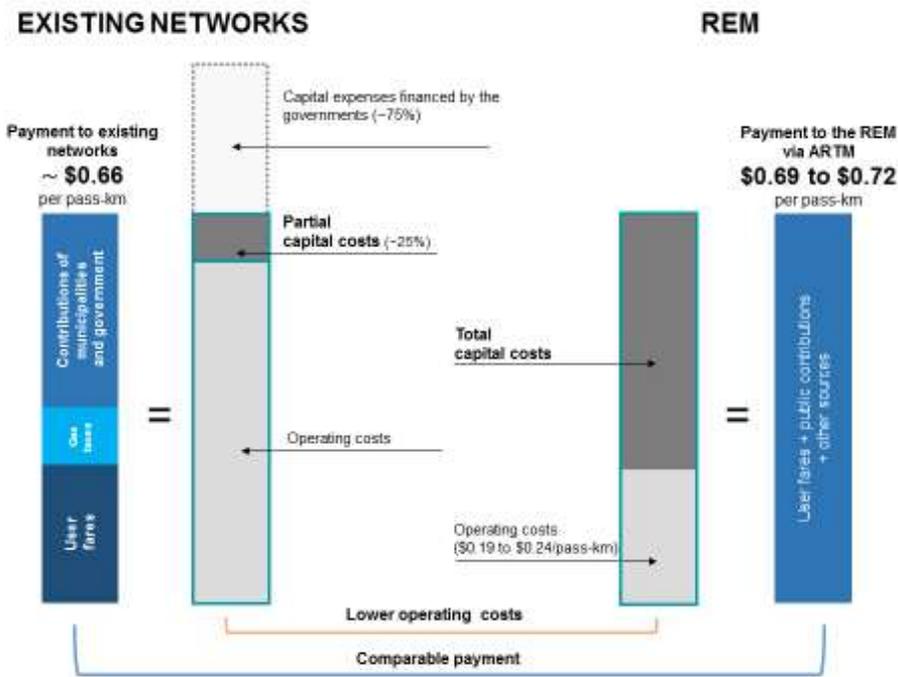
Once discussions with governments and the ARTM are concluded and calls for tenders are completed, the REM's definitive financial framework will be known, including the rate of return validated by an external auditor, and made public as planned.

### **1. A new public transit system financed, built and operated with payments comparable to the operating costs of existing networks**

Public transit operating costs are financed by two main sources: (1) revenues from user fares and (2) public contributions to public transit. More than 75 percent of capital costs associated with existing systems (buses, trains, métro, construction of networks) are assumed by governments, and are not included in the networks' operating budget.

By dividing the total estimated operating budget of transit authorities in the Greater Montréal area for 2022 (approximately \$2.9 billion) by an estimate of the total number of passenger-km in 2022 (approximately 4.4 billion), the weighted average cost is approximately \$0.66/passenger-km for the existing networks in 2022.

With the REM project, CDPQ Infra achieves the objective of covering both the operating and capital costs of the new system with a cost per passenger-km that is comparable to the operating costs of existing networks. As shown in the figure below, this result is made possible by the REM's operating costs, which are significantly lower than those of existing networks.



Current estimates of ARTM payments to the REM vary between \$0.69 and \$0.72 per passenger-km. Among other factors, this variability is due to the fact that discussions are still under way between CDPQ Infra and the ARTM, that the terms of governments’ participations have not been finalized, that the price of final submissions is not known, and that ARTM payments to the REM may be adjusted based on certain ridership thresholds being reached, as explained in greater detail below.

## 2. Increased ridership and improved public transit

Increasing public transit ridership within existing networks requires substantial capital expenditures.<sup>1</sup> Recent projects aimed at increasing the service and reach of networks – extension of the métro to Laval, the eastern commuter train, AZUR metro cars – have been fully financed by governments. The CDPQ Infra model allows for increases in ridership while limiting costs to governments as a result of la Caisse’s significant participation in project financing, equity investments by governments, and the REM’s low operating costs.

The tables below outline the REM’s economic and operational benefits in the context of increased ridership and a public transit system significantly improved by the addition of a new, 67-km electric network of 27 stations, operating 20 hours a day, 7 days a week.

<sup>1</sup> The Deux-Montagnes line and the reserved-lane bus service on the Champlain Bridge are saturated.

### OPERATIONAL IMPROVEMENTS

	Existing networks (2022)	Networks including REM (2022)
<b>Deux-Montagnes frequency (peak)</b>	~ 30 minutes on average	6 minutes
<b>Deux-Montagnes – downtown travel time</b>	40-45 minutes	32-34 minutes
<b>South Shore frequency (peak)</b>	15 minutes	3 minutes
<b>South Shore – downtown travel time</b>	20-25 minutes (from Chevrier)	15-17 minutes
<b>Airport frequency</b>	8 minutes	6-12 minutes
<b>Airport travel time</b>	45-60 minutes	18-24 minutes
<b>Additional capacity</b>	saturated networks	substantial

### FINANCIAL IMPACTS

	Existing networks (2022)	Networks including REM (2022)
<b>ARTM total costs</b>	~ \$2.900 billion	\$2.940 to \$3.030 billion <sup>1</sup>
<b>REM additional contribution</b>	N/A	\$40 to \$130 million (2 to 4%)

<sup>1</sup> ARTM total costs take into account contributions to the REM, contributions due to the increase in ridership, and savings generated from replacing the Deux-Montagnes lines, the reserved-lane bus service on the Champlain Bridge and the shuttle services to the Montréal-Trudeau Airport.

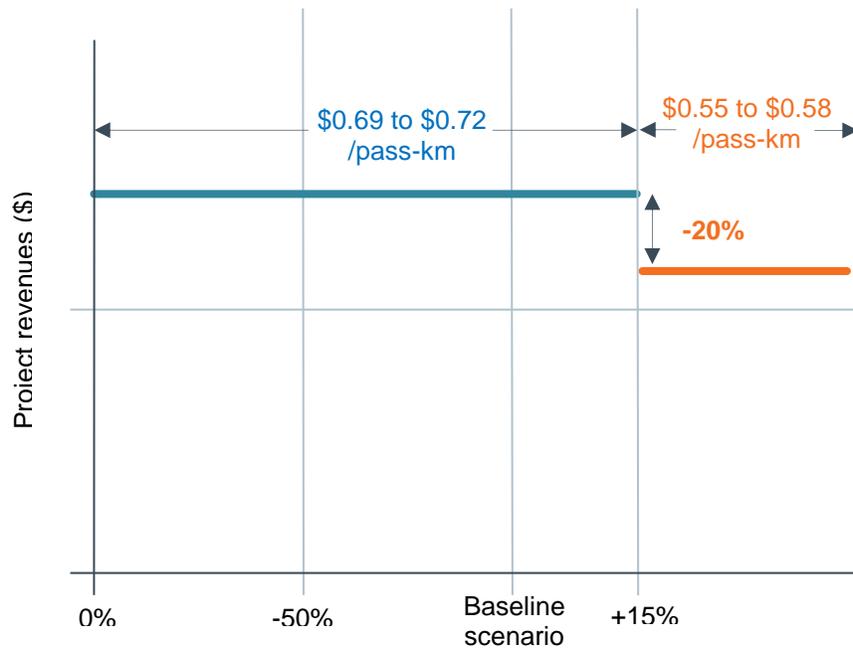
The REM's benefits are all the more significant considering that the table above excludes two important financial components:

- (1) The major capital costs that would be required to increase ridership on existing networks to the same degree as the REM – costs that would be mainly assumed by governments; and
- (2) Optimization and possible efficiency gains, which could eliminate or reduce the net increase in contributions associated with the start of REM operations.

These estimates highlight the clear benefits of the CDPQ Infra model: increased public transit ridership and a new, efficient network, valued at close to \$6 billion, built and operated for an increase in contributions to public transit of 2 to 4 percent. Furthermore, several sources of financing are available to reduce, compensate or pay for this increase while mitigating the impact on municipalities.

### 3. Modulation of ARTM contributions based on ridership

In Vancouver, Canada Line ridership exceeded forecasts by around 20%. CDPQ Infra plans to adjust its revenues per passenger-km based on actual REM ridership. As shown in the figure below, REM revenues would therefore be \$0.69 to \$0.72/passenger-km if ridership reaches up to 15% higher than a baseline scenario, but would drop to \$0.55-\$0.58/passenger-km for ridership above this threshold. The specific terms of this mechanism are part of the ongoing discussions with the ARTM.



This adjustment to REM revenues based on pre-established thresholds decreases revenues per passenger-km should ridership exceed projections by more than 15 percent. Beyond this threshold, REM revenues per passenger-km (which cover both operating costs and the system’s capital costs) become lower than the weighted average of the existing networks’ operating costs.