








The choice: a skytrain named **Delusion** or **Public Transit Solutions that benefit people**

<p>The Caisse de Depot wants to build an Eight Billion Dollar <i>Skytrain</i>.</p> 	<p>Why such an expensive system?</p> <p>Several of their businesses would profiteer from billions in public subsidies.</p> <p><i>Skytrain</i> : raise taxes, raise greenhouse gas emissions, encourage urban sprawl, create auto traffic congestion and waste money</p>
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With the same budget, we can replace a wasteful *Skytrain* with the “Grand Virage”.

Six tramway lines, costing five Billion dollars.					
					
+ three metro stations : costing one billion dollars					
Bois-Franc and Poirier			Pie IX /Jean-Talon		
+ Renovate existing commuter trains with the remaining two billion dollars.					
The Vaudreuil /Dorion Train line Increase its frequency			The Two-Mountains Train line Increase its capacity		

These projects

- will serve 3 to 4 times as many users than the proposed *Skytrain*;
- will reduce our Greenhouse gases emissions by 500,000 tons per year.

**Please ask your elected officials of the
Montreal region to choose a “Grand Virage”**

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The REM, a plan that cannot be economically justified

Choosing the *Skytrain* technology is a mistake without benefits, that multiplies costs.....



A *Skytrain* is automated. It has no driver. This requires traffic separation, either on elevated ways or in tunnels, with a cascade of negative consequences:

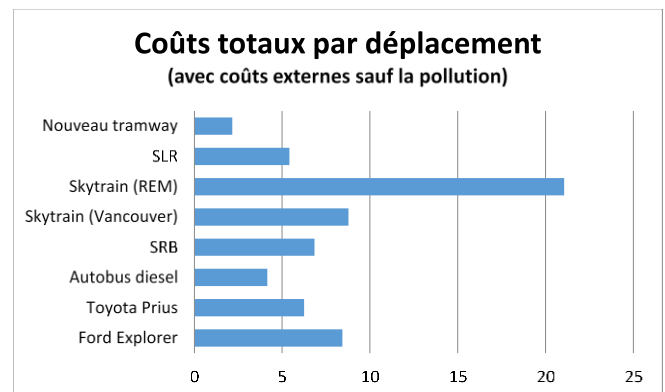
- Very high capital costs, particularly with respect to stations;
- The number of stations has to be reduced to contain costs;
- With reduced numbers of stations, fewer users can arrive on foot;
- To compensate, the Caisse plans sixteen thousand parking spaces at stations;
- These enormous parking lots prevent the creation of true *Transit Oriented Development* neighbourhoods.

What are the real costs of the REM when subsidies are included?

The Caisse has kept secret the project's financial facts. We present estimates of costs.

	Very optimistic estimate	Realist estimate
Initial Investissement	Six Billion \$	Nine Billion \$
Amortisation	40 years	30 years
Interest on cost	5%	8%
Annual capital repayment	335\$ millions	660\$ millions
Operating costs	80\$ millions /an	120\$ millions /an
Daily Ridership	160 000 trips per day	130 000 trips per day
Annual Ridership	51 millions Trips	42 millions Trips
Total cost per trip	8,10\$	18,50\$

To confirm this high cost per trip, we can compare it with other forms of transport, based on a Vancouver study (P. M. Condon, K. Dow, *A Cost Comparison of Transportation Modes*, November 2009, Foundational Research Bulletin, no. 7).



For a network of similar length, the ridership of the Vancouver *Skytrain* is 400,000 users a day, while the REM is planning 130 to 160 thousand users per day. We can thus show an evaluation of REM costs corrected as a function of ridership. The total cost per trip per passenger on the REM is eight times as high as on a tramway.

On the South Shore, we have also analyzed the case a tram-train (with driver) on the Champlain Bridge, also serving Taschereau Boulevard and the Longueuil Metro. Even with a longer route than the skytrain, this option is one Billion dollars cheaper.

So why did the Caisse choose a *Skytrain* when other options are four to eight times less expensive?

- The Quebec Government promised the Caisse three Billion dollars of subsidies in capital costs and, another billion in existing AMT infrastructure, with ownership of the tunnels under Mount Royal.

► **The Caisse chose technologies and lines that multiply profits for its other investments, in concrete production, real estate and Bombardier Transport.** A few other examples of businesses owned by the Caisse set to profit from REM lines: Dix-30 and Fairview Shopping Centre, properties near Central Station and new buildings along the route on the land bank (which will be expropriated).

- The choice of the *Skytrain* favours Bombardier Transport, eliminating many competitors with other technologies.

- The choice of *Skytrains* requires enormous quantities of concrete, cement for which will come from a new cement plant in Port Daniel in Gaspésie. The Caisse and Bombardier own much of it.

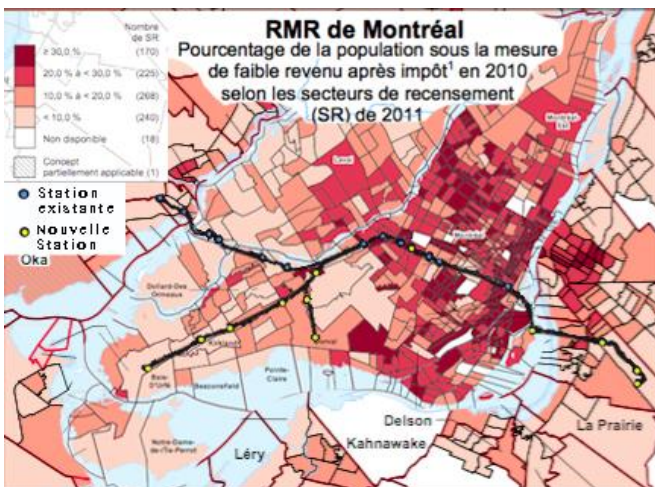
The REM fails to meet the transit needs of Montrealers

The Société de transport de Montréal (STM) published a map of its most used bus routes.



This map shows that the highest need for new electric transit is located in the East and the South-West of the City. Evident too is a major requirement to reduce pressure on the Metro's Orange line (Henri Bourassa-Berri) which is over-saturated in rush hours.

The next map shows that the Caisse has deliberately avoided serving the poor and densely populated neighbourhoods of the region with the REM.

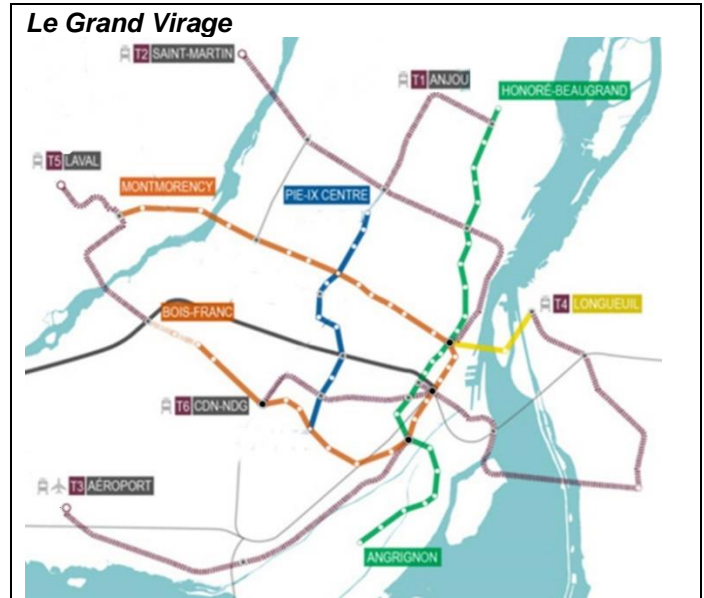


Here therefore, a summary of decisions by the Caisse :

- ▶ Serve several of the richest neighbourhoods to the North-West.
- ▶ On the South Shore, serve a huge Shopping Centre surrounded by agricultural land.
- ▶ No service for the neediest part of Montreal.
- ▶ Do nothing to reduce pressure on the Orange line.
- ▶ Demolish and rebuild the Two Mountains line even though it is already electrified and also the best performing line in the AMT (and not yet amortized).

An alternative plan adapted to our real needs – *The Grand Virage*

To show that better options for new transit exist, which actually meet the needs of Montrealers, several local public transportation specialists have proposed a solution of six new tram lines and three new metro stations. On the following plan, the new tram lines are indicated by dashes



Here are descriptions of the new lines

	Tramway lines and added Metro stations
T1	Métro Radisson / Anjou / Pie-IX / CHUM
T2	Pie IX: from Métro Pie-IX (Green line) to Laval.
M1	Metro (Blue line) : a new station at the corner of Pie IX and Jean-Talon
T3	Airport /Dorval /Lachine /Métro Lionel-Groulx
T4	Métro Longueuil / Taschereau / Pont Champlain / Métro Peel
M2	Métro: Poirier et Bois-Franc
T5	Tramway: Le Carrefour /Métro Montmorency /Métro Bois-Franc
T6	Métro Guy /Cotes-des-Neiges /De la Savane /Terrains Hippodrome

This plan would cost less than the REM: five Billion dollars for six tram lines with 128 stations; one Billion dollars for three Metro stations. This plan provides eight times as many new stations as the REM and would serve three to four times as many passengers. Moreover, there would be two billion dollars leftover to renovate suburban train lines.

We do not argue that this exact alternative should be implemented. Indeed, a consultation process is essential to improve the design of the lines. But *The Grand Virage* is useful to illustrate the fact that the REM proposal is totally unjustified.

An anti-democratic process from an arrogant Caisse with the complicity of very few elected officials

The Réseau électrique métropolitain (REM) has been conceived in complete secrecy, without consultation with a single existing local transportation service. The Caisse's impact study also sadly lacks a number of features:

- ▶ No economic justification of the scheme;
- ▶ No information on what fares may be;
- ▶ Nothing on the scheme's effect on urban sprawl;
- ▶ No evaluation of Greenhouse Gases (GHG) produced.

Five ministries have judged the Caisse's impact study as "not receivable". Other ministries have judged the impact study incomplete. Nonetheless, the Minister of the Environment and the Premier have judged the studies receivable anyway.

Elected members of the Communauté métropolitaine de Montréal (CMM) wrote a long list of probing questions to the Caisse de Dépôt. Then, the Mayor of Montreal prevented this list from being formally deposited. This removed the "rights to know" of the elected officials involved. This stratagem allowed the Caisse to keep secret all of the economic facts that they know, or think they know, about the project.

Here are several questions asked by various government departments and to which the Caisse has refused to answer.

Evaluate the total GHG emissions related to the construction phases of the scheme

This is a requirement by the Minister of the Environment and sustainable development. The Caisse has refused so to do. The concrete in the overhead trackways and in the tunnels produce very high quantities of GHG's. The following chart gives these quantities based on analyses of similar projects.

CO2 emissions created by the construction phase

	Emissions by the project	Emissions adapted to the REM's length
San Francisco, Bay Area Rapid Transit Skytrain *	1 128 000 tons	800 000 tons
Vancouver Skytrain **	Construction & maintenance : 55 tons / passager / km	960 000 tons
North West rail link Sydney Skytrain	48 000 tons for 4,6 km	700 000 tons

*Mikhail V. Chester, Life-cycle Environmental Inventory of Passenger Transportation in the United States, *Institute of Transportation Studies*, Berkeley, 2008

**P. M. Condon, K. Dow, *A Cost Comparison of Transportation Modes*, November 2009, Foundational Research Bulletin, no. 7

***Hanson Hidelberg cement group

Later the Caisse announced that the REM would permit the reduction of GHG's of 27,100 tons per year by replacing diesel buses. Twenty-five years of operation would therefore be necessary to offset the construction emissions.

The Caisse must assess the impact of the skytrain on Farmland and on Urban Sprawl:

This was a requirement by Ministry of Municipal Affairs. The Caisse did not make such an assessment. Here are the facts:

- ▶ On the South Shore, the terminal station (situated beside the Dix-30 shopping center) requires important de-zoning of agricultural land.
- ▶ The branch lines, ending in Ste-Anne de Bellevue and at the Dix-30, both promote low density urban sprawl and dependence on the automobile; they will both, cause highway congestion and increase Greenhouse gases.

Comparing le Skytrain with other options:

This is a requirement of the Ministry of Transportation, Sustainable Mobility and the Electrification of Transport. The Caisse refused to do this. The Minister however clearly affirmed that *"the choice of an SLR has not been clearly demonstrated as the only mode of transport able to meet the needs of the region"*. *"A comparison between different modes is pertinent"*.

Comparing GHG's of the Skytrain with those of the Grand Virage

	REM	Grand virage
Direct emissions saved by replacement of buses with trams	27,100 tons/year	356 000 tons /year (12x more)
Emissions tied to construction (especially concrete)	Between 700 000 & 960 000 tons	About 10x less
Emissions tied to urban planning (to 2025)	Urban Sprawl an extra 60 000 tons	Urban Concentration A drop of 45 000 tons

In complete secrecy, the Caisse designed a self-serving project, without considering the objectives of Quebec

The REM encourages several harmful trends:

- ▶ promotion of Urban Sprawl and dependence on automobiles
- ▶ Increased use of petroleum
- ▶ Increased Greenhouse Gas emissions

In fact, the threat of the REM is doubly negative. For the next ten or fifteen years, the project will use all the funds available for mass transportation, preventing Quebec from making the changes necessary to attain its targeted reduction of Greenhouse gases.