Réseau électrique métropolitain (REM)

BAPE public hearings

Montréal
August 29, 2016

CDPQ Infra

- Wholly owned subsidiary of la Caisse established in June 2015
- Role: act as project manager for major infrastructure projects around the world, from planning to operation
- Builds on la Caisse's 15 years of infrastructure experience in Canada, Europe, the United States and Australia
- In the public transportation sector, CDPQ Infra is a shareholder of The Canada Line, Eurostar, Heathrow Express, Gatwick Express and Kéolis

PROJECT BACKGROUND

- In January 2015, the Québec government submitted two projects to la Caisse for review:
  - A public transit system to link the South Shore to downtown Montréal over the future Champlain Bridge
  - An improved public transit system to link downtown Montréal to the airport and the West Island

- After rigorous analysis, CDPQ Infra proposed a single integrated transportation network linking downtown Montréal, the South Shore, the West Island (Sainte-Anne-de-Bellevue), the North Shore (Deux-Montagnes) and the airport

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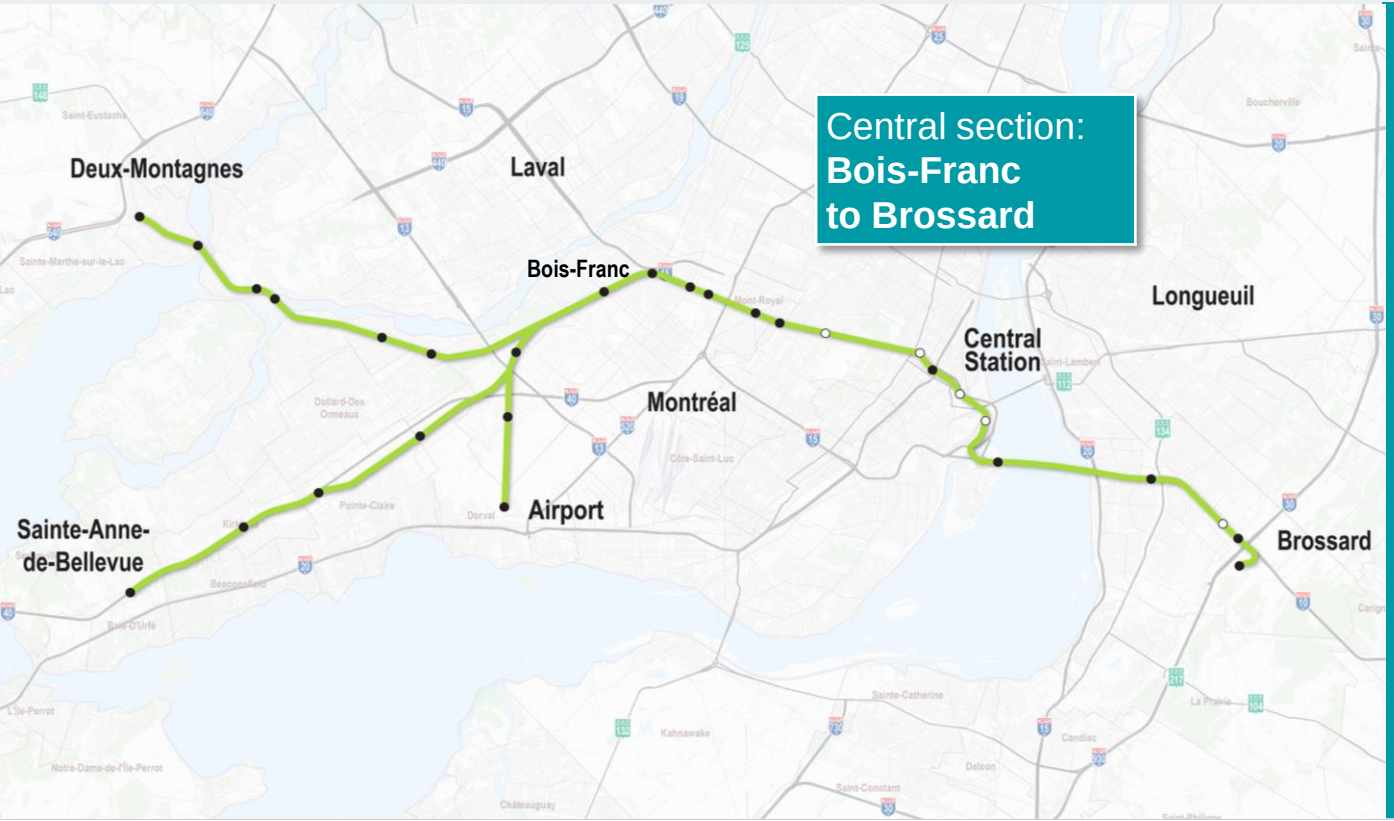
PROJECT OVERVIEW



100% electric and automated light rail transit system

67 km (80% on existing corridors)
24 stations, **9** terminals
13 parking facilities

Frequency on the central section:
3 min peak times
6 min off-peak times

20 hrs/day, **7 days/7**

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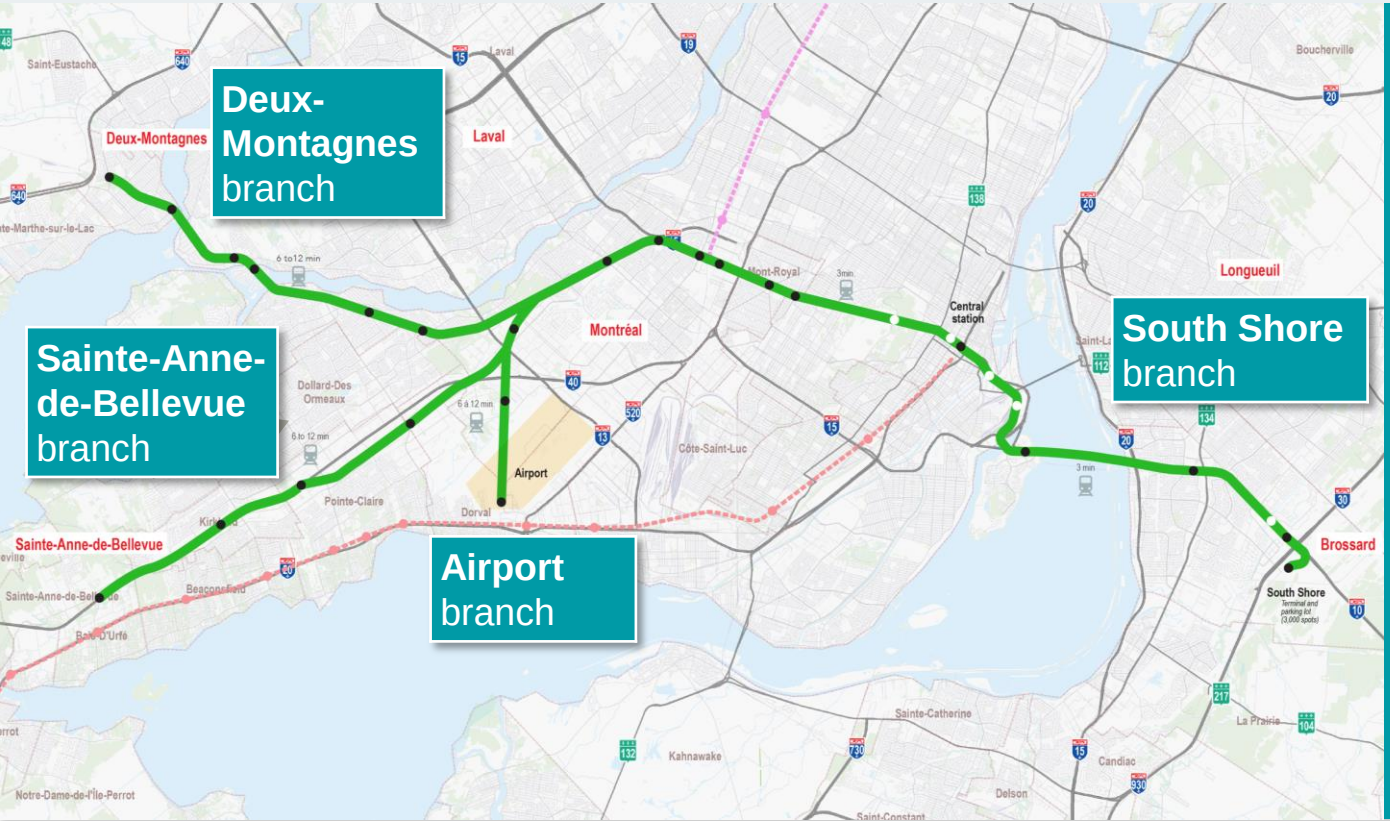
PROJECT OVERVIEW



Largest public transit project in the past 50 years

More **fluid, efficient travel** in the Greater Montréal area

Reduced GHG emissions through increased use of public transit and use of an electric system

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Component	Estimated cost
Infrastructure (rail, stations, structures, bridges, etc.)	$4 billion
Rolling stock (cars, control systems, etc.)	$1.5 billion
Total	$5.5 billion

> La Caisse has committed to invest $3 billion in the project

> The financial structure also requires investments by the governments of Québec and Canada

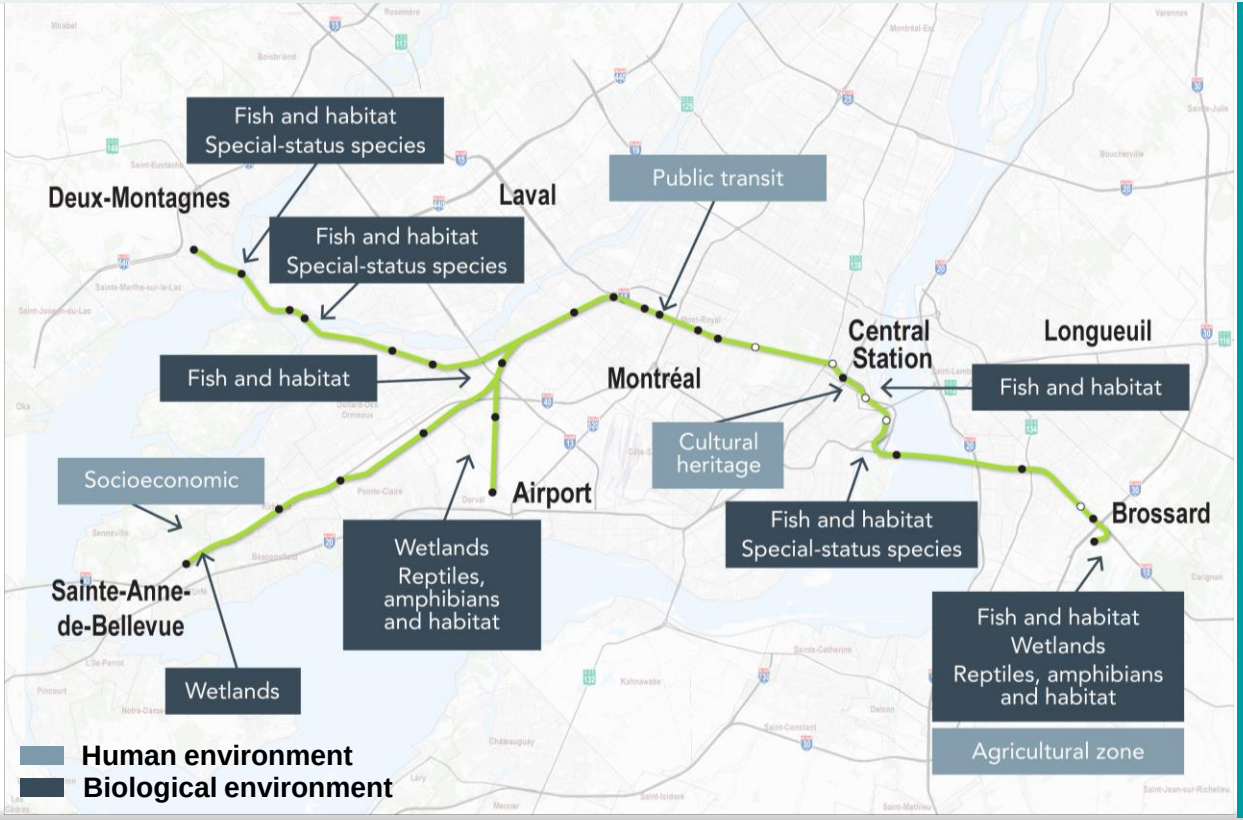
Technical analyses and impact studies carried out

- Air quality and its effects on climate
- Hydraulics and ice regime
- Hydrography, hydrology and surface water flow
- Surface water quality
- Hydrogeology and groundwater flow
- Soil quality
- Wetlands
- Protected sites or sites of ecological interest
- Ichthyological fauna and habitat
- Herpetofauna and habitat
- Special-status wildlife and plant species
- Road safety
- Road traffic
- Cultural heritage
- Archeological heritage
- Agricultural zone
- Recreational and tourism activities
- Socioeconomic
- Infrastructure and public services
- Soundscape
- Public transit services

Public consultation

- More than **1,500** citizens met during six public open house events
- More than **120** representatives from different organizations met, including mayors, environmental groups and heritage specialists
- Working tables set up with municipalities and transit authorities
- More than **1,000** individuals reached through an online public consultation regarding users' expectations

IMPACT STUDY



Following the consultations and analyses carried out, solutions were identified to optimize the project and minimize its impacts

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Fish and habitat

IMPACTS

Disturbance to water quality and aquatic life in connection with the installation of rail bridge supports

EXAMPLES OF PROPOSED MEASURES

Mitigation

- Carry out work outside of critical periods for fauna
- Prohibit materials containing small particles
- Use barges for construction work

Compensation

- Fully compensate lost habitat surface area in accordance with applicable standards

Wildlife species at risk

IMPACTS

Impact on the habitats of species present in various areas of the route

EXAMPLES OF PROPOSED MEASURES

Mitigation

- Install barriers to prevent specimens from accessing work areas
- Relocate specimens caught
- Carry out construction outside of nesting periods

Compensation

- Create suitable habitats to relocate specimens caught

Wetlands

IMPACTS

Impacts on hydrogeology and integrity of the Des Sources nature park wetlands, on the Sainte-Anne-de-Bellevue and South Shore wetlands, and on the Des Prairies stream

EXAMPLES OF PROPOSED MEASURES

Optimization

Technoparc:

- Underground section in the rock to avoid the Des Sources nature park

Sainte-Anne-de-Bellevue:

- Move certain facilities east, such as the incentive parking and the bus terminal, to avoid harming two identified wetlands

Mitigation

South Shore:

- Maintain a safe distance between wetlands and the construction site
- Reconstruct bed and shoreland when construction is completed

Reptiles, amphibians and habitat

IMPACTS

Impacts on the reptile or amphibian habitats due to lost wetland area

EXAMPLES OF PROPOSED MEASURES

Optimization

- Underground section in the rock to avoid the Des Sources nature park

Mitigation

- Avoid temporary accumulation of debris on the construction site
- Relocate specimens caught

Compensation

- Create suitable habitats to relocate specimens caught

Nuisances during construction

IMPACTS

Nuisances (noise and dust) during construction along the route and primarily during construction of new stations

EXAMPLES OF PROPOSED MEASURES

Mitigation

- Noise control program
- Dust control:
  - Use of dust-suppressants, cleaning of trucks as they leave the sites, minimum storage of cuttings and embankments on sites, etc.
- Rigorous environmental monitoring and control program

Cultural heritage

IMPACTS

Partial demolition of the Rodier Building and possible demolition of the Drummond-McCall and New City Gas buildings

EXAMPLES OF PROPOSED MEASURES

Optimization

- Agreement with CN to preserve the Rodier Building
- Optimize the route to fully preserve the Drummond-McCall and New City Gas buildings

Public transit

IMPACTS

- Temporary impacts on the Deux-Montagnes line and closure and temporary diversions of certain arteries
- Transfer of Mascouche line users at the “Correspondance A-40” station
- Bus services replaced

EXAMPLES OF PROPOSED MEASURES

Mitigation

- Bus service to serve passengers during off-peak periods on the Deux-Montagnes line
- Proactive communication with passengers
- Design “Correspondance A-40” station to facilitate transfers
- Feeder bus services to the REM

Agricultural zone

IMPACTS

REM facilities infringe upon agricultural land

EXAMPLES OF PROPOSED MEASURES

Compensation

- Conversion of non-agricultural lots into agricultural lots
- Develop greenhouses on the roofs of certain REM stations or facilities
- Set up public markets in parking facilities during weekends to distribute regional products

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Socioeconomic

IMPACTS

- Partial or total acquisitions of lots along the route
- Potential residential and commercial development increased in vicinity of Anse-à-l'Orme park

EXAMPLES OF PROPOSED MEASURES

Mitigation

- Provide follow-ups and support to owners affected by the work
- Work with City to make sure that real estate development respects development plan

DOWNTOWN STATIONS

Édouard-Montpetit, McGill and Bridge-Wellington stations

- Progress on analyses
- Possible technical solutions and financing options under review
- Prices and solutions requested from qualified consortiums

PROJECT BENEFITS

- Serves the region's main employment hubs
- Vector of $5 billion in private investments for real estate development along the route
- Reduced economic losses associated with road congestion (estimated at $1.4 billion/year in the metropolitan region)
- Increased workers' productivity and quality of life through substantial time savings

7,500 jobs per year during construction (4 years)

$3 billion contribution to Québec GDP

Reduction of 16,800 tonnes/year of GHG emissions (minimum direct reductions)

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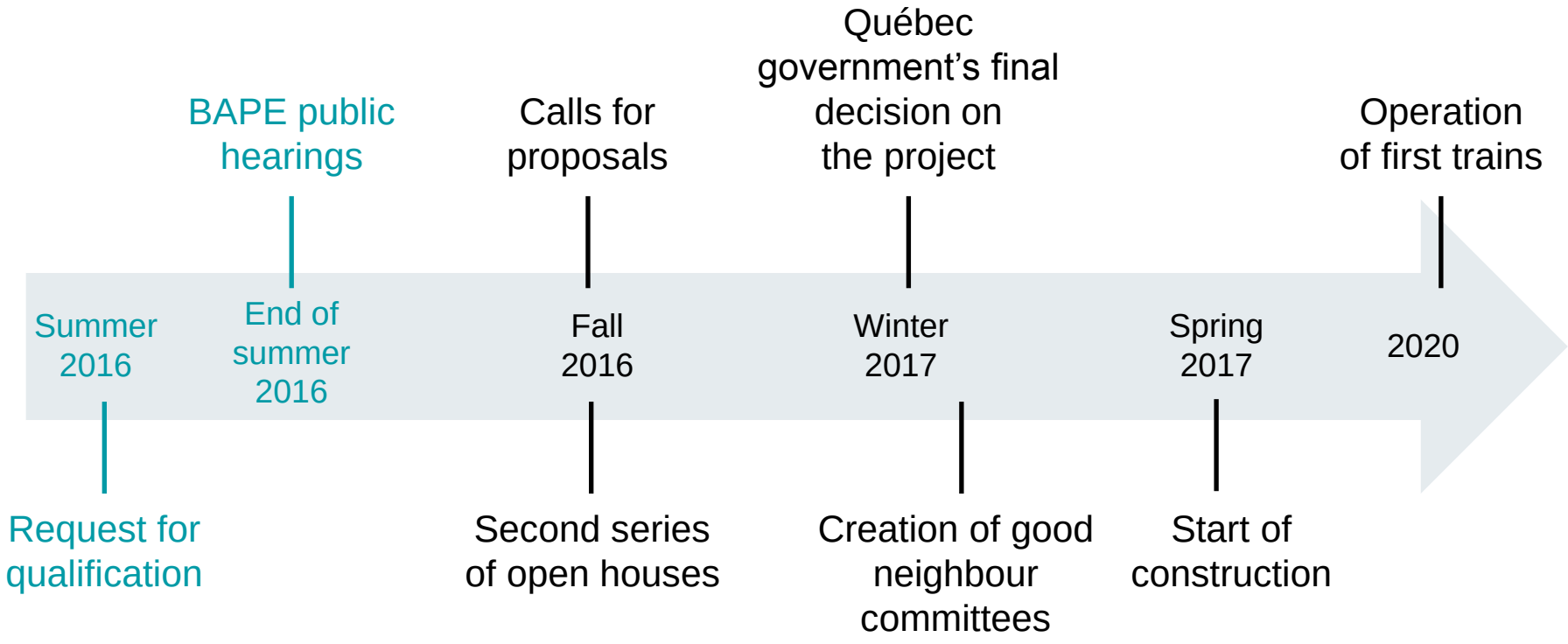
NEXT STEPS



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CONCLUSION

- Largest public transit project **in the past 50 years**
- **3rd largest automated network** in the world
- Addresses clearly identified transportation **needs**
- **Considerably improves** the electric public transit offer
- More than **400 experts** involved in planning the REM, in close collaboration **with stakeholders**

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