

# Advancing Electric Buses In Metro Vancouver

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**Transit Police**

**Coast Mountain Bus Company**

**West Coast Express**

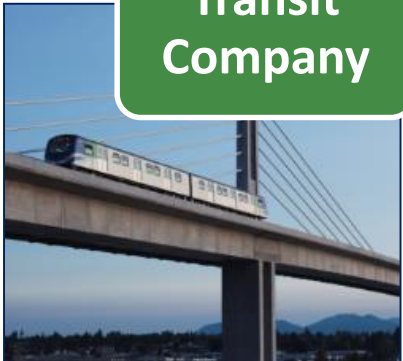
**Roads and Bridges**



**BC Rapid Transit Company**

**Cycling**

**TransLink**  
(Operations & Integrated Regional Planning)



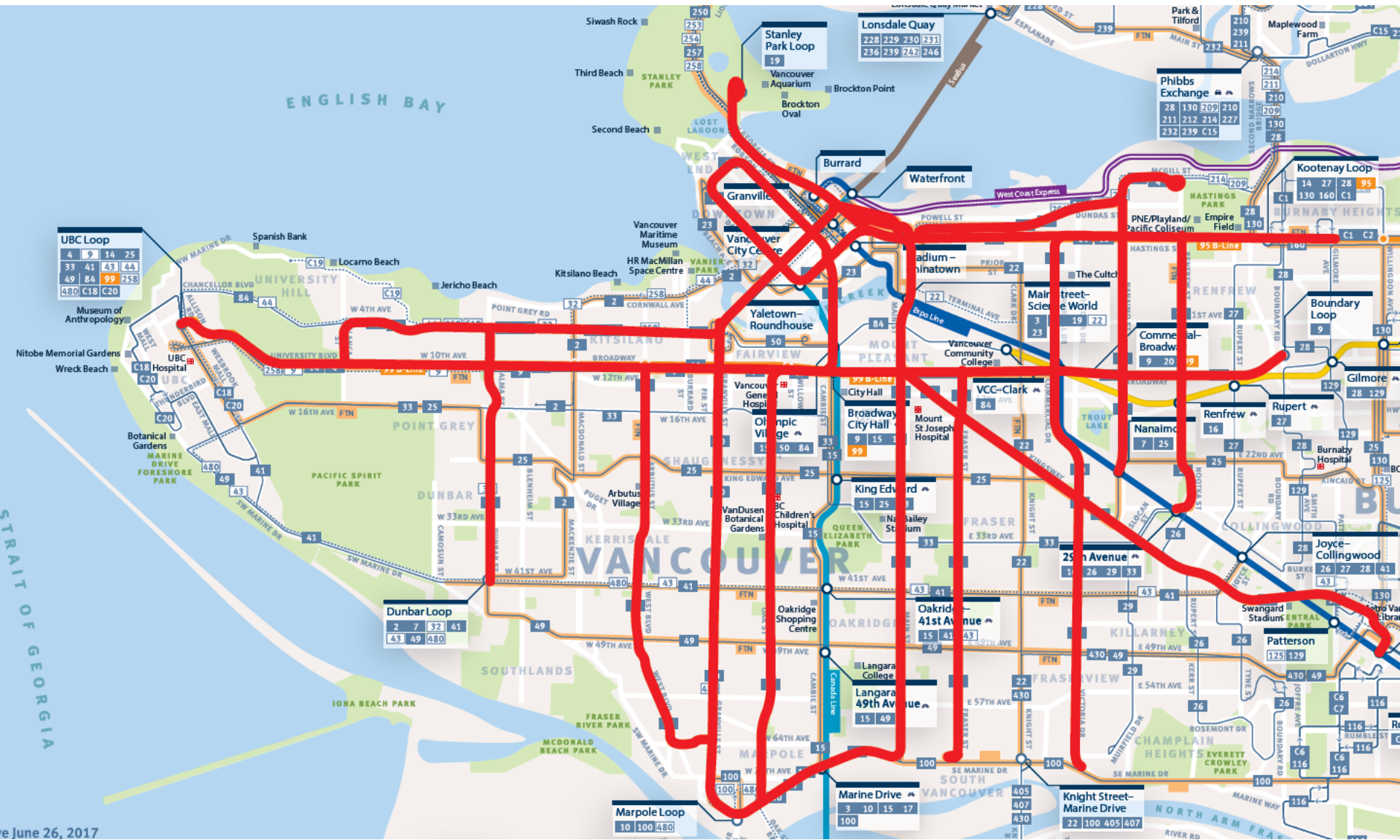
# Service Area – Metro Vancouver



# TransLink's Trolleybus Fleet

- Electric Trolleybuses have been in service since 1948
- 262 Electric Trolleybuses in service today (188 – 40Ft buses, 74 – 60Ft buses)
- 315 KM of wire, 13 routes serving Vancouver and Burnaby
- Approximately 200,000 weekday average daily boardings on TransLink's 13 trolleybus routes

# Trolley Network



June 26, 2017



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GET A  
"DOWNTOWNER"  
ONLY 25%

THE MEN  
HERE SMILE  
MORE  
CHEVRON  
STANDARD  
The Chevrolet ABOVE ALL  
means service



# BYD Battery-Electric Bus (Slow Charge Trial)

- In-service trial of a slow-charge battery-electric bus
- Bus is in TransLink livery with additional decaling noting that the bus is a zero-emissions vehicle and battery-electric
- Charging infrastructure has been installed at the Vancouver Transit Centre (VTC)
- The bus is operating on a variety of routes within the City of Vancouver
- Opportunity to collect technical inputs on slow-charge technology to inform upcoming work on the Low Carbon Fleet Strategy



# BYD Battery-Electric Bus



Charing Infrastructure



Battery-Electric Bus

# CUTRIC Electric Bus Trial (Fast-Charge)

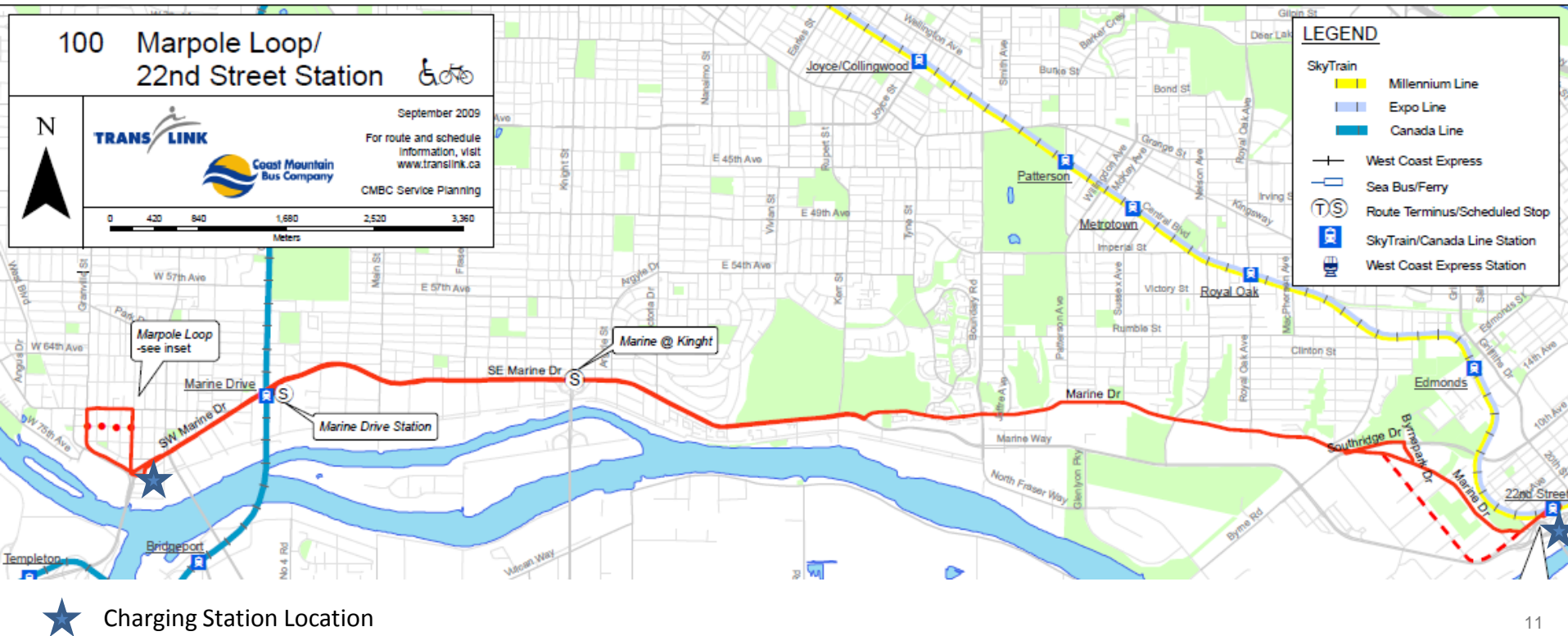
- CUTRIC is the national innovation consortium created in 2014 as a Centre of Excellence supported by the Canadian Urban Transit Association.
- CUTRIC supports, develops and helps to co-finance advanced collaborative research projects between industry and academic institutions in the following areas:
  - zero- and low emissions transportation and vehicular systems;
  - connected and autonomous vehicles;
  - light-weight materials for advanced vehicular design; and
  - big data driven optimized transit networks

## Objectives of the trial

- Test, demonstrate and evaluate the applicability of fast-charge electric buses in TransLink's future fleet
- Leverage funding opportunities to explore and build institutional knowledge on electric bus vehicle technology
- Assist in the standardization of overhead charging technology for transit vehicles.
- Partnership opportunity with municipalities on advancing low carbon fleet initiatives

# What does the CUTRIC Trial entail?

- Deployment of four electric-battery buses (2 New Flyer and 2 Nova Bus) in revenue service
- Installation of two on-route charging stations on Route 100 Marpole Loop/22<sup>nd</sup> Street SkyTrain Station
- 2.5 year trial period for monitoring and evaluation
- Commencement of the trial is targeted for mid 2018



# Trial Fleet



# Partners



# Low Carbon Fleet Strategy Objectives

- Phase One of the 10-Year Vision of the 2017-2026 Investment Plan commits TransLink to develop a Low-Carbon Fleet Strategy to reduce GHG emissions across the region.
- The development of the Low Carbon Fleet Strategy will guide longer-term fleet planning (2020-2040).
- The intent of the Low Carbon Fleet Strategy is to understand everything that will be required to make “low carbon” technologies work given their limitations – and to fully assess the associated costs and potential trade-offs;

***Deliverable:*** Low Carbon Fleet Strategy which includes technology recommendations for future bus fleet and non-revenue fleet and fuel purchases, which will allow TransLink to transition to the lowest practical levels of fleet GHG emissions, consistent with local, provincial, and Federal climate goals and policy, as well as projected future funding and service levels.

# Low Carbon Fleet Strategy Tasks

