

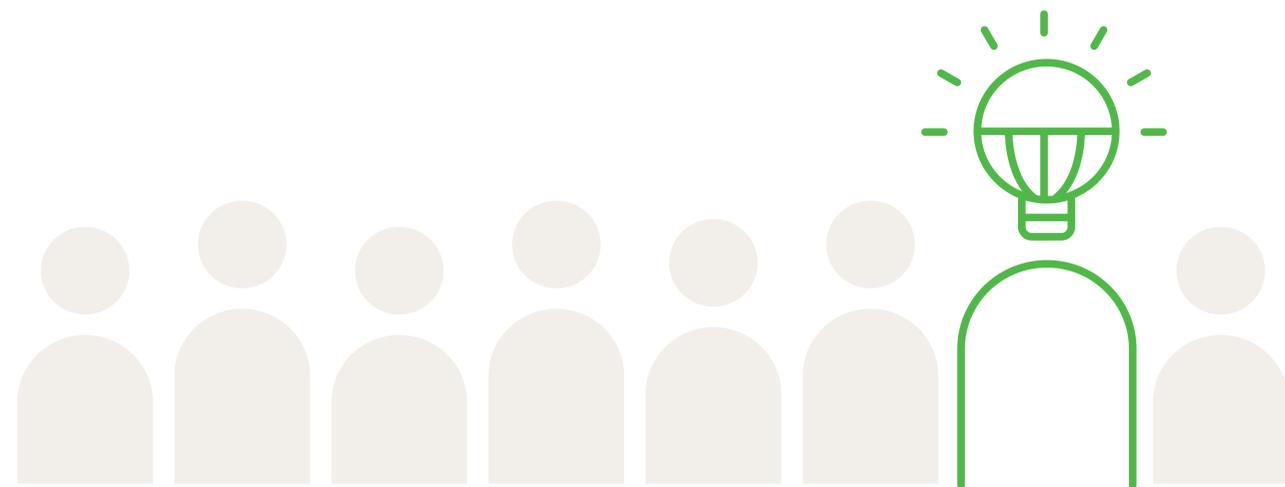
# Welcome

## Metro North Transmission Project Burnaby Community Information Open House

March 8, 2017

Thank you for attending this Community Information Open House about the Metro North Transmission Project.

We're here to provide you with updated information on the project, including information about how we're planning to cross Burrard Inlet and underground routing options through Burnaby city streets.



## About the Metro North Transmission Project

We need an additional transmission line between Coquitlam and Vancouver to address the growing demand for electricity resulting from the region's increasing population.

We're working to have the line in place as early as 2020<sup>1</sup>, to improve the region's transmission network by increasing electrical transmission capacity and strengthening reliability.

Our current transmission system is approaching its limit and, without these improvements, the network faces reduced service reliability. Under certain conditions, this could mean outages for the equivalent of about 30,000 homes and businesses, and service interruption for the equivalent of about 90,000 homes and businesses.

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<sup>1</sup> Required in service date is influenced by load forecast, which is monitored annually.

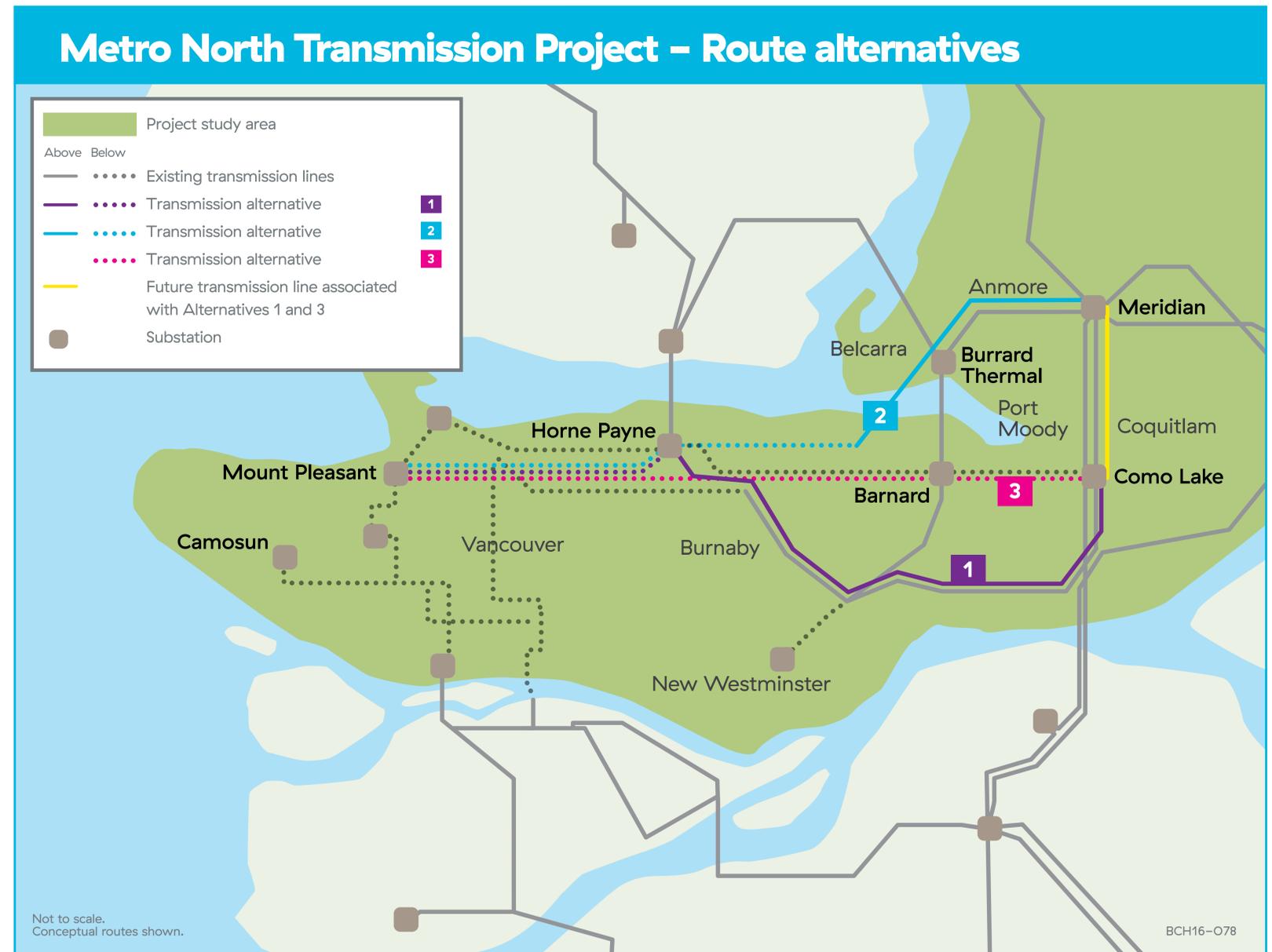
# Project Update

We're moving forward with Alternative 2 for the Metro North Transmission Project. This alternative involves a new 230 kilovolt (kV) transmission line extending from Meridian Substation in Coquitlam through Anmore, Port Moody and Burnaby to the Mount Pleasant Substation in Vancouver.

When compared to the other alternatives studied, Alternative 2 has:

- Fewer overall residents and property owners potentially impacted by construction;
- Lower seismic and construction risks; and
- The most capacity for the investment.

We chose to move forward with this alternative after over 60 meetings with local and regional governments, transportation authorities, community groups and others to discuss the need for transmission improvements and the alternatives; ongoing engagement with First Nations; meetings with affected property owners; and technical work.



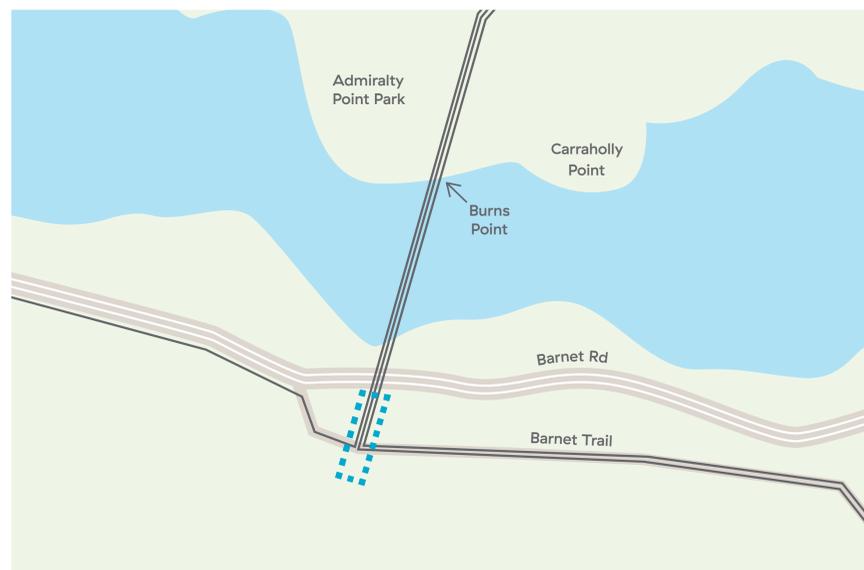
# Crossing Burrard Inlet

From Admiralty Point Park (at Burns Point) in Port Moody, the additional 230kV line would cross Burrard Inlet to BC Hydro-owned land south of the Barnet Highway. Here, the overhead line would transition to an underground line, which would extend through Burnaby into Vancouver.

This site was previously used by BC Hydro for construction staging during the stringing of the overhead transmission line conductor across Burrard Inlet.

The site is now second-growth deciduous forest. During field studies, no at-risk plant or wildlife species were identified.

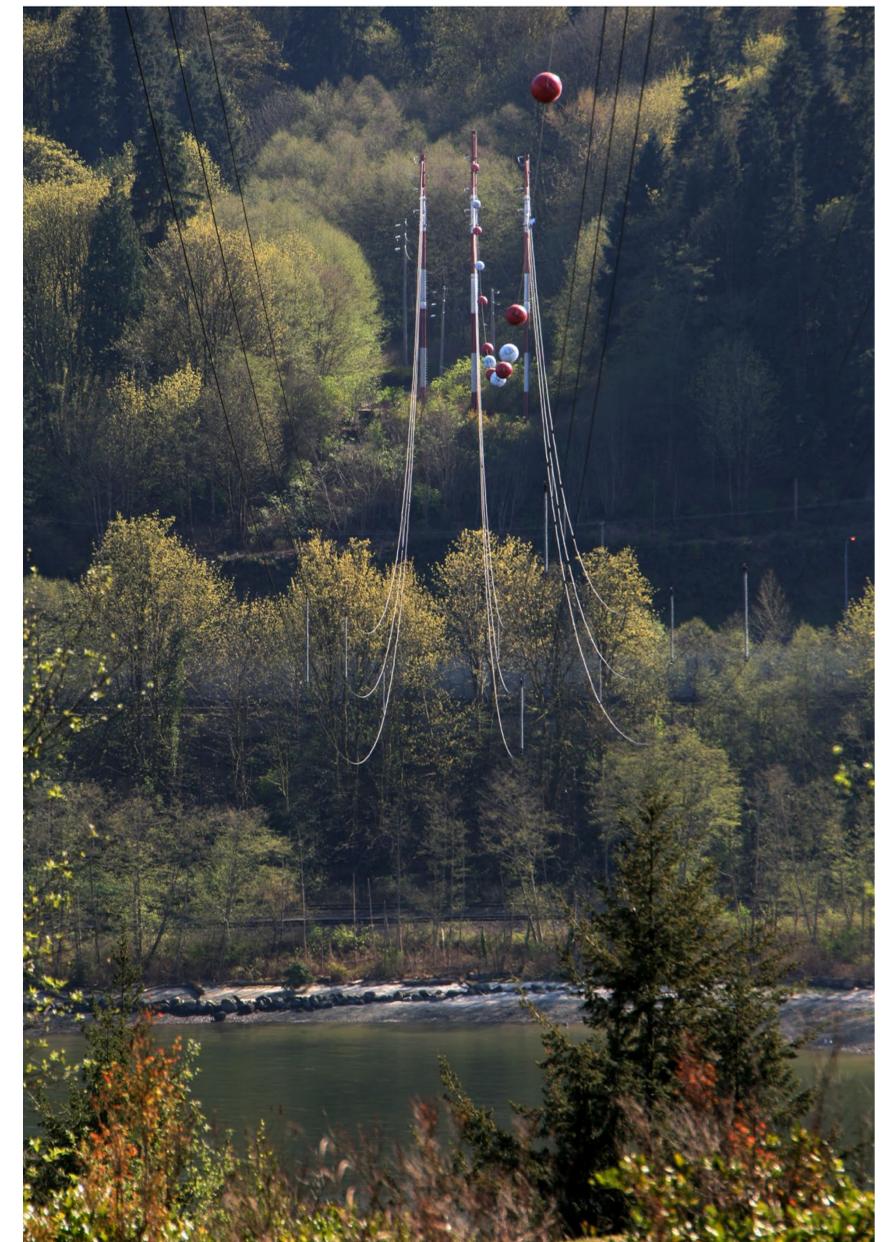
While transitioning of the line would require limited tree and vegetation clearing at this site for safety and constructability, we would keep a vegetation buffer along the Barnet Highway to help minimize effects on the view of this area from the highway and across Burrard Inlet.



Burrard Inlet crossing and Burnaby landing site



Burnaby landing site



Existing Burrard Inlet crossing, looking south

# Routing – Barnet Highway

After the overhead line transitions to an underground cable south of the Barnet Highway, the cable would follow the highway underground to Hastings Street. Geotechnical drilling is underway, and will continue, along the highway to better understand the subsurface conditions.

## Minimizing effects on commuters

We understand that the Barnet Highway is a busy commuter route. If this project proceeds, we're committed to managing traffic during construction, to make sure that we minimize the impacts to people who use this road, and that people know what to expect during their commute.



Barnet Highway – area of planned construction.

# Routing – Burnaby City Streets

From the Barnet Highway, the underground cable would follow the preferred route, with alternate routes identified (see map to the right).

Based on feedback we heard from the City of Burnaby, the proposed routing would be along major road corridors, where possible, to minimize construction impacts in residential neighbourhoods. The route that we have identified minimizes cable length and cable bends; avoids streets that already have high utility congestion; avoids small, residential streets; and avoids commercial areas, like The Heights on Hastings Street.

Minor upgrades would be made to the Horne Payne Substation and Barnard Substation (see map), where the cable ties in and exits, before it continues on underneath Highway 1 and into Vancouver. We would use trenchless construction methods such as Horizontal Directional Drilling (HDD) or tunneling to route the line under Highway 1.

## Metro North Transmission Project – Burnaby route options

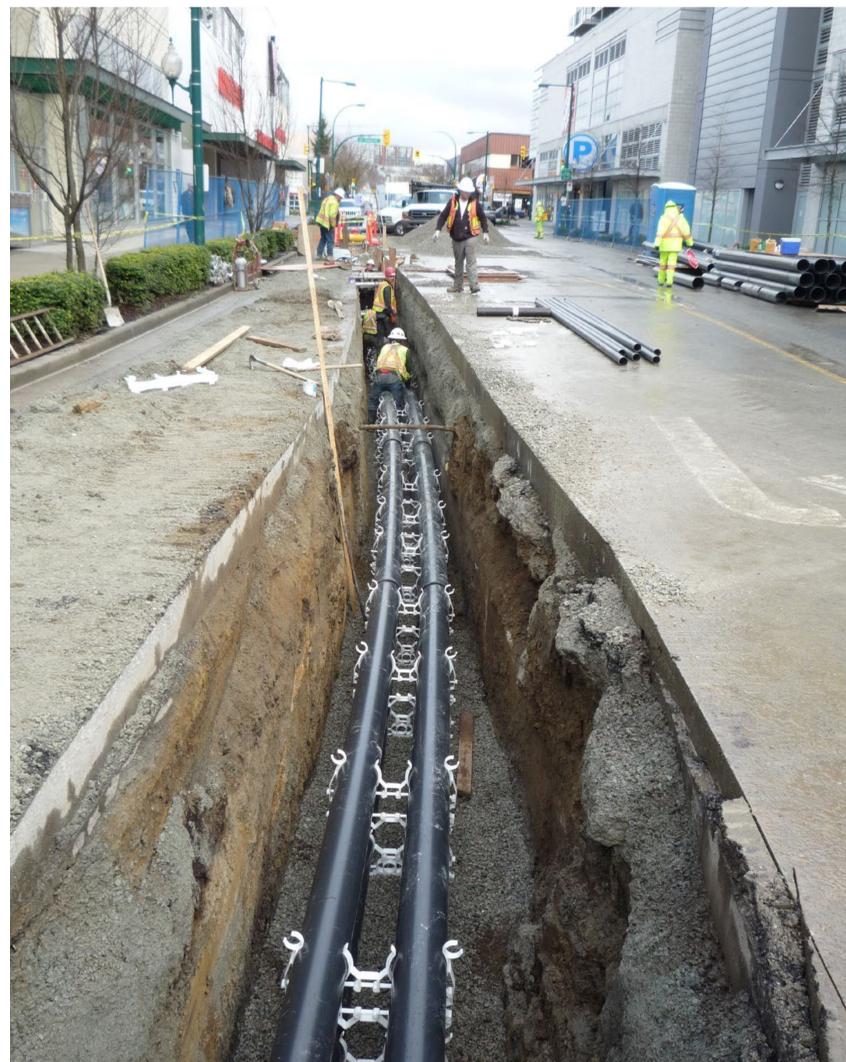


We recognize that our routing options have the potential to affect trees. As we continue to explore the feasibility of these options, we will also be identifying how to ensure that the health and stability of trees is maintained.

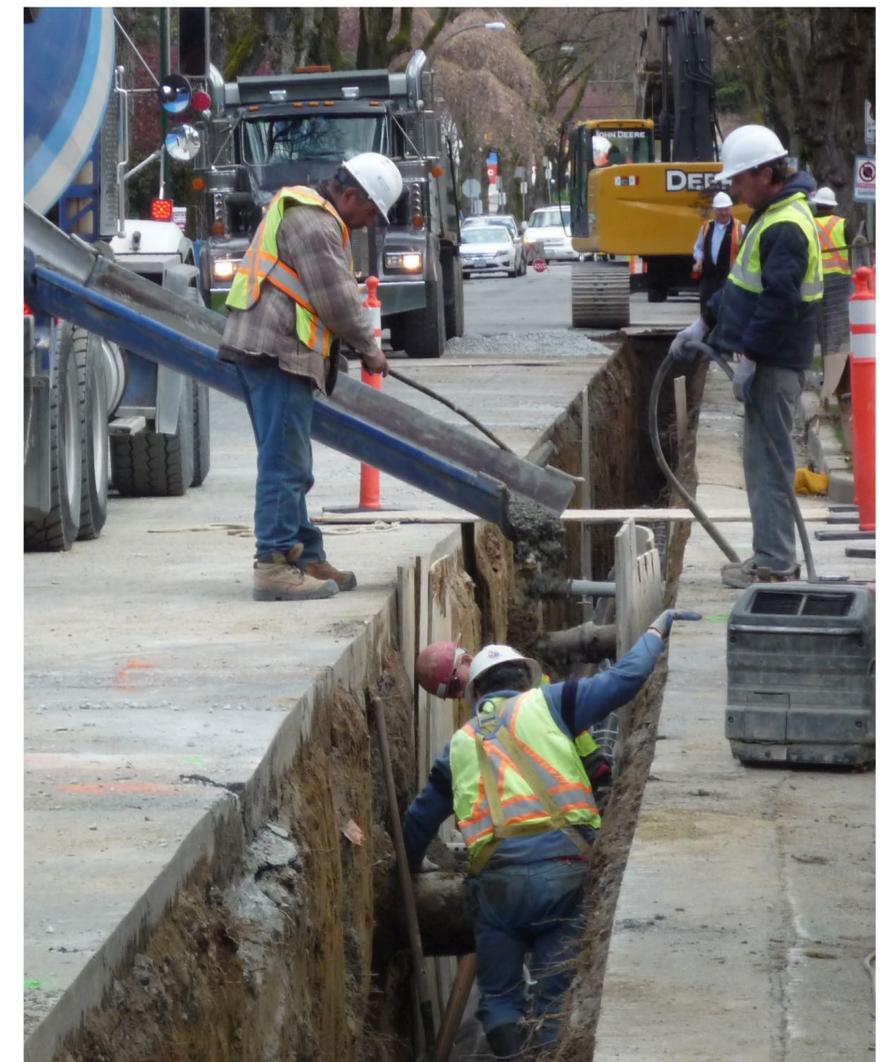
# Underground Cable Construction

## Underground civil works

- **Duct banks:** (1m x 1m) buried 1 to 3m below grade along the length of the road between manholes. Duct banks consist of 4 ducts that can hold 3 phases of cable and a spare.
- **Manholes:** (12m x 3m x 3m) buried 0.60m below grade every 800m of duct bank



Typical underground cable duct bank installation



Encasing duct bank in concrete

# Underground Cable Construction

## Duct bank and manhole construction

- Work completed on a block by block basis
- Each block takes 5 to 8 days to complete
- Requires excavating, installing and backfilling
- Access to driveways is maintained
- Two lane closures are required and work can be completed during non-peak traffic hours



Typical manhole installation

# Underground Cable Construction

## Installing underground cable

- Cables are pulled through the duct banks after civil works are complete
- Cable pulling from manhole to manhole takes one week
- Cable segments are joined at the manholes – this takes two weeks per manhole
- Once the equipment is set up it stays on-site until the work at the site is complete



Typical underground cable pull

# Next Steps

The next steps for the Metro North Transmission Project include geotechnical drilling, environmental and archaeological studies, and finalizing the routing for the underground cable.

We will continue working with local and regional governments, including Burnaby, Anmore, Belcarra, Port Moody, Coquitlam, Vancouver and Metro Vancouver, property owners, residents, stakeholders and the public to provide opportunities for you to receive up-to-date information, as well as provide your feedback, ask questions or express interests or concerns.

More information will be available on [bchydro.com/mnt](http://bchydro.com/mnt) and we encourage you to email us at [stakeholderengagement@bchydro.com](mailto:stakeholderengagement@bchydro.com) to sign-up for updates.

## We are here

