

McLellan Substation upgrade

Meeting demand in Surrey and Langley

The Surrey/Langley region is one of the fastest-growing regions in Canada, and we are investing in upgrades at McLellan Substation, located at 196 Street and 54 Avenue, to ensure we can continue to meet the electricity needs of the region.

The scope of work includes:

- Replace old and existing feeder sections with new equipment.
- Expand the existing feeder sections within the station fence to provide more feeder positions to service more areas.
- Add a new shunt capacitor bank to relieve voltage constraints to support load growth in the Central Fraser Valley Regional Transmission System.
- Add a new transformer to the station, requiring an expansion of the station fence in the southeast corner.

What is McLellan Substation?

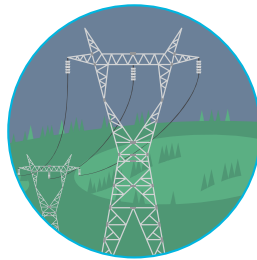
McLellan Substation is a distribution substation built in 1950s that takes electricity at higher voltages (230kV) and converts it down to 25kV for supply of power to homes and businesses in the neighbourhood. There is also a switching function for the 60kV transmission lines that goes through this station.

Over 49,000 customers are being served by McLellan Substation. This number is expected to grow as density in the area increases. The current area McLellan Substation serves extends north to Willoughby, south to the U.S. border, west to Cloverdale, and east to 232 Street.



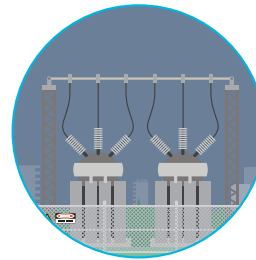
Generation

Electricity is generated by BC Hydro and independent power producers.



Transmission

Electricity is moved from where it's produced to where it's used.



Substations

Voltage is reduced at substations to provide power suitable for use in your home or business.



Distribution

Low voltage electricity is provided to neighbourhoods and businesses.

What's the benefit of this upgrade?

This upgrade will provide increased reliability to the electrical system by addressing near end-of-life equipment, and relieving voltage constraints, and will double the capacity of this substation. This upgrade will prepare for future growth in the area and allow homes, businesses and industries to continue to grow.



Existing feeder section



Example of a shunt capacitor bank



Example of a medium voltage transformer