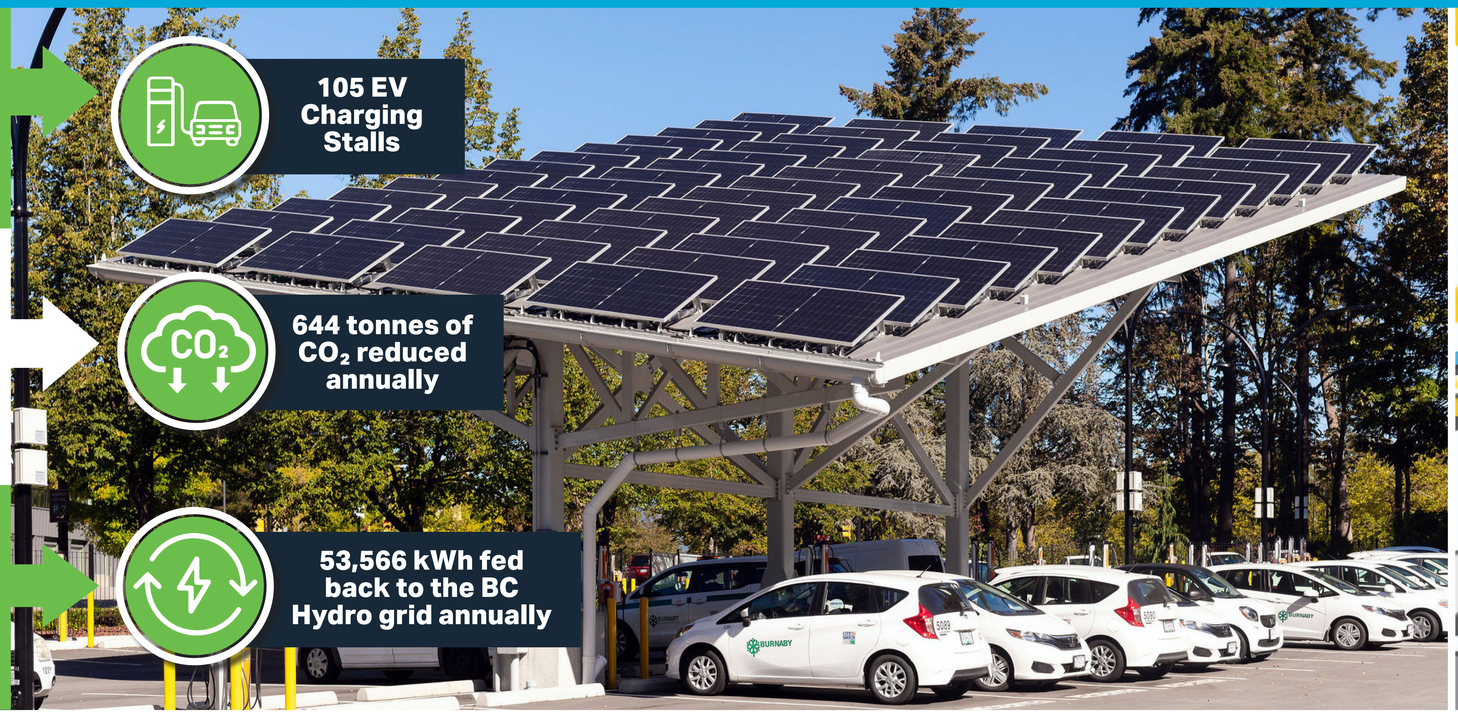
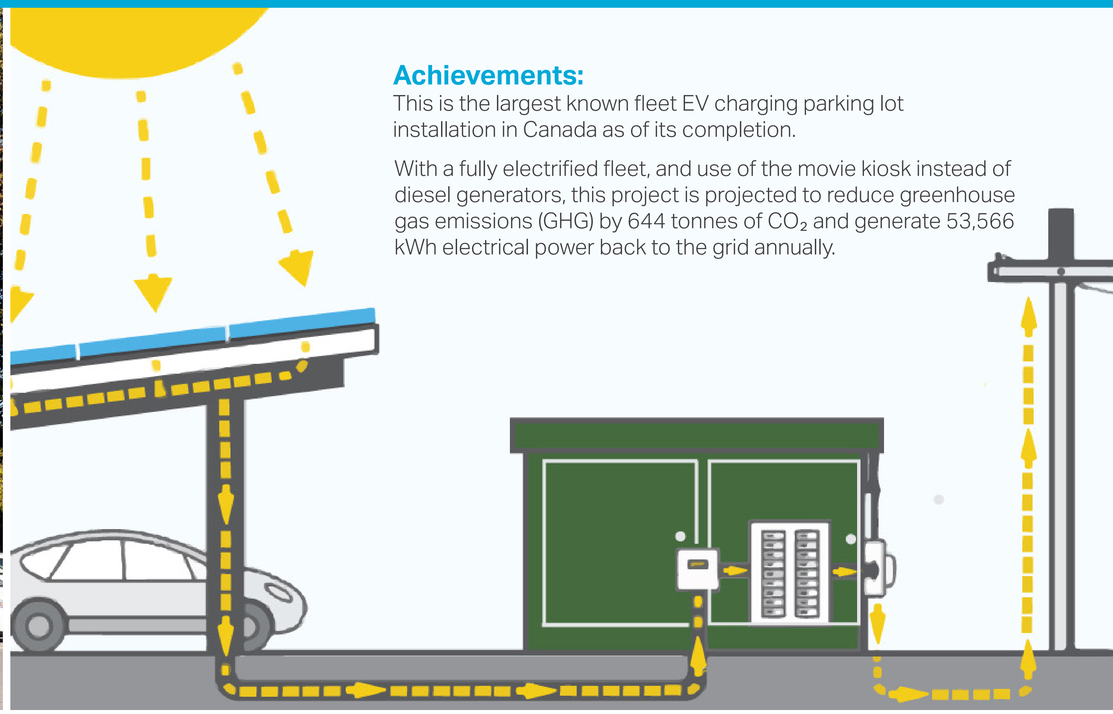
CITY HALL FLEET ELECTRIC VEHICLE CHARGING STATIONS AND SOLAR CANOPY

BINNIE





Achievements:

This is the largest known fleet EV charging parking lot installation in Canada as of its completion.

With a fully electrified fleet, and use of the movie kiosk instead of diesel generators, this project is projected to reduce greenhouse gas emissions (GHG) by 644 tonnes of CO_2 and generate 53,566 kWh electrical power back to the grid annually.

The City of Burnaby declared a Climate Emergency in 2019 and this project directly supported the City's Energy Strategy and Low Carbon Transition Plan with new electric vehicle (EV) charging infrastructure for powering fleet vehicles. The City required engineering services for the design and construction of 105 EV charging stations at the City Hall Fleet Compound Lot.

Solar Canopy

- We designed a new solar panel canopy that generates revenue through BC Hydro's Net Metering Program during times when the EV chargers are not in full use. This method aids in lowering peak power demand. In designing the solar panel, we observed the sun's rotation to optimize the tilt of the solar canopy and maximize solar exposure at the charging station.

Movie Kiosk

- The City is an active participant in the local film industry, so Binnie prioritized integrating a movie set power kiosk into our design to allow for movie equipment to be powered from the BC Hydro service instead of running on mobile diesel generators.

Oil & Grit Separator (OGS)

- To further address the Climate Emergency, we upgraded the parking lot drainage system with a new storm water oil grit separator to prevent hydrocarbons and debris from entering the storm system.