



# Electric Vehicle (EV) Readiness Requirements for All New Residential Developments

February 7, 2022



# Purpose

- ▶ To seek Council direction on EV readiness requirements:
  - ▶ All new residential developments have a minimum of 1 energized electric vehicle outlet per dwelling unit (capable of providing Level 2 charging)
  - ▶ Investigate additional EV readiness requirements

# Previous Council Direction

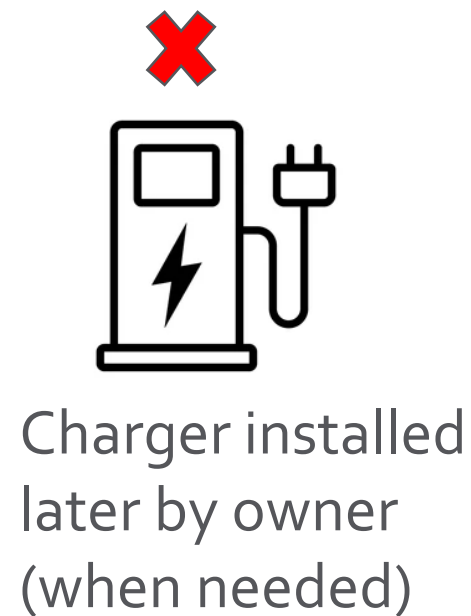
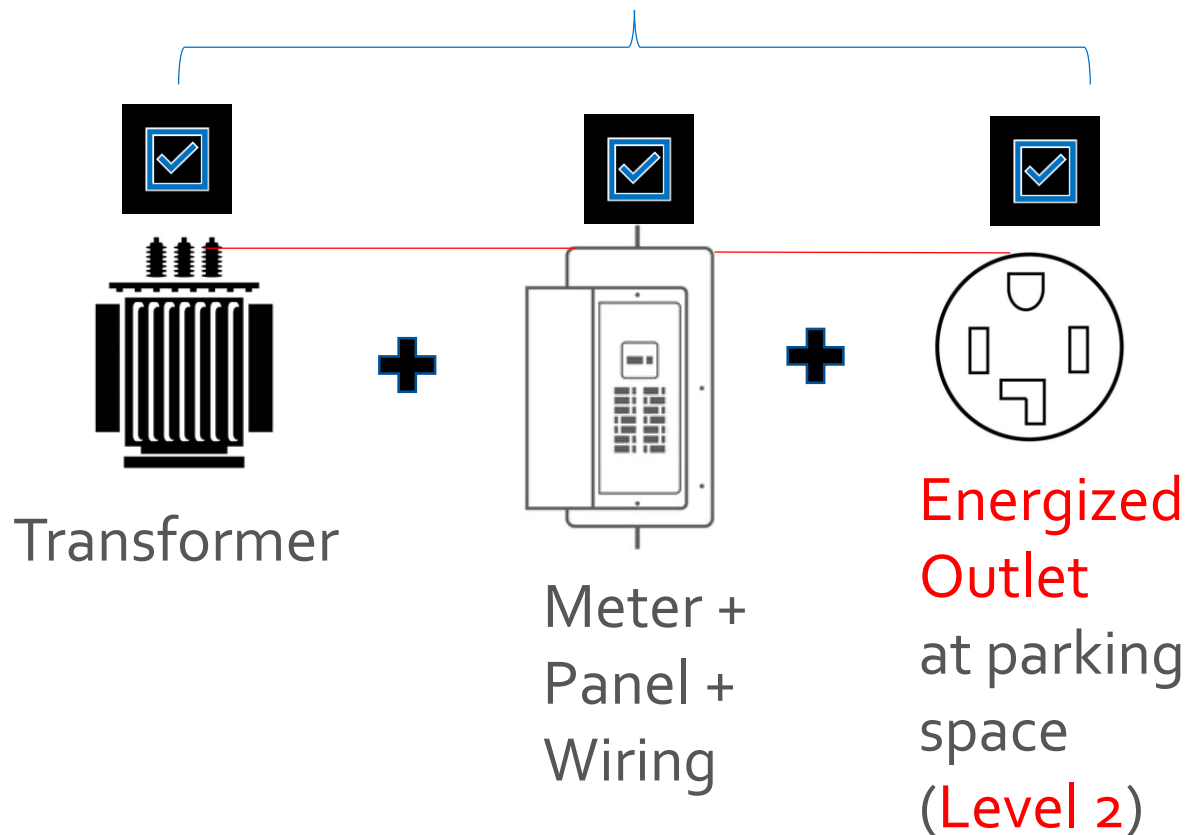
(Sept 27, 2021)

- ▶ Council endorsed the Strategy and directed staff to:
  - ▶ Include electric vehicle (EV) charging requirements in Kelowna Zoning Bylaw
  - ▶ Pursue stakeholder engagement on this issue



# Key Terms

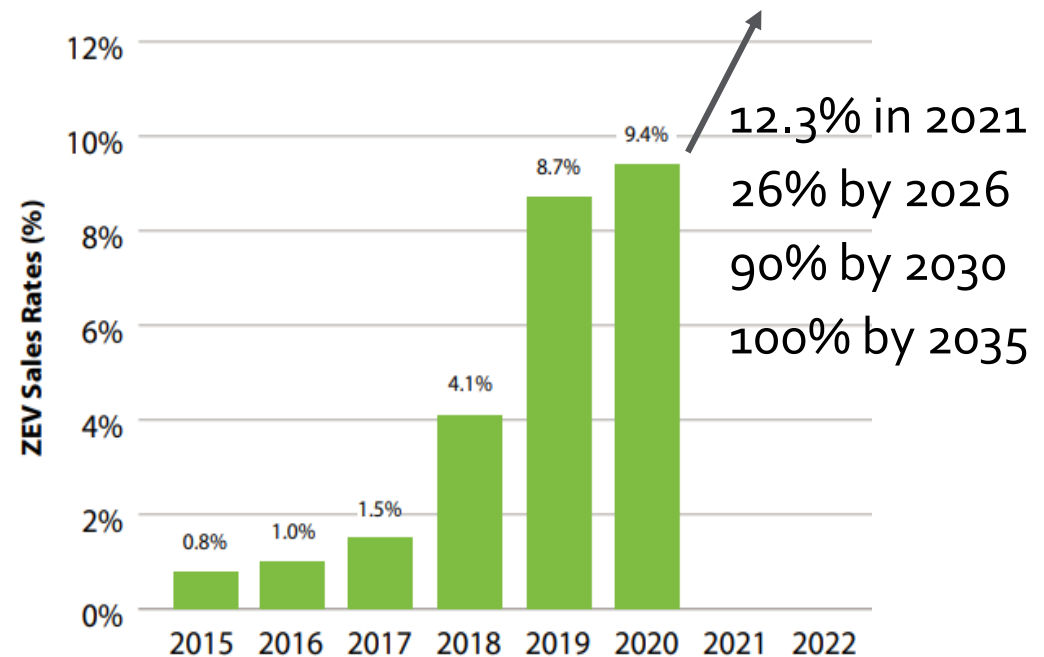
“EV Ready”



# BC Leading the EV Charge

- ▶ Rapidly increasing EV adoption rates in BC
- ▶ EV ownership in Kelowna nearly tripled between 2018 and 2020
- ▶ Strong federal and provincial EV sales mandates

**British Columbia Light-Duty Vehicle ZEV Sales Rates**

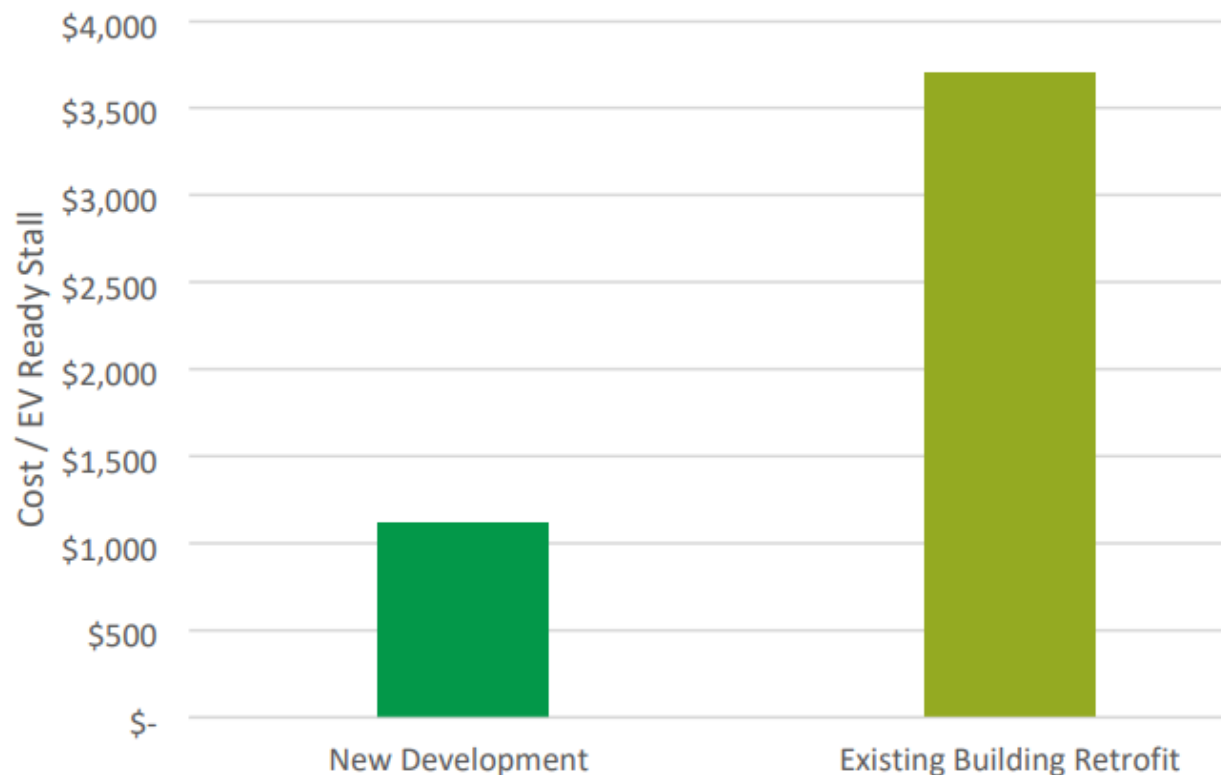


# Charging availability at home critical to enable transition to EVs



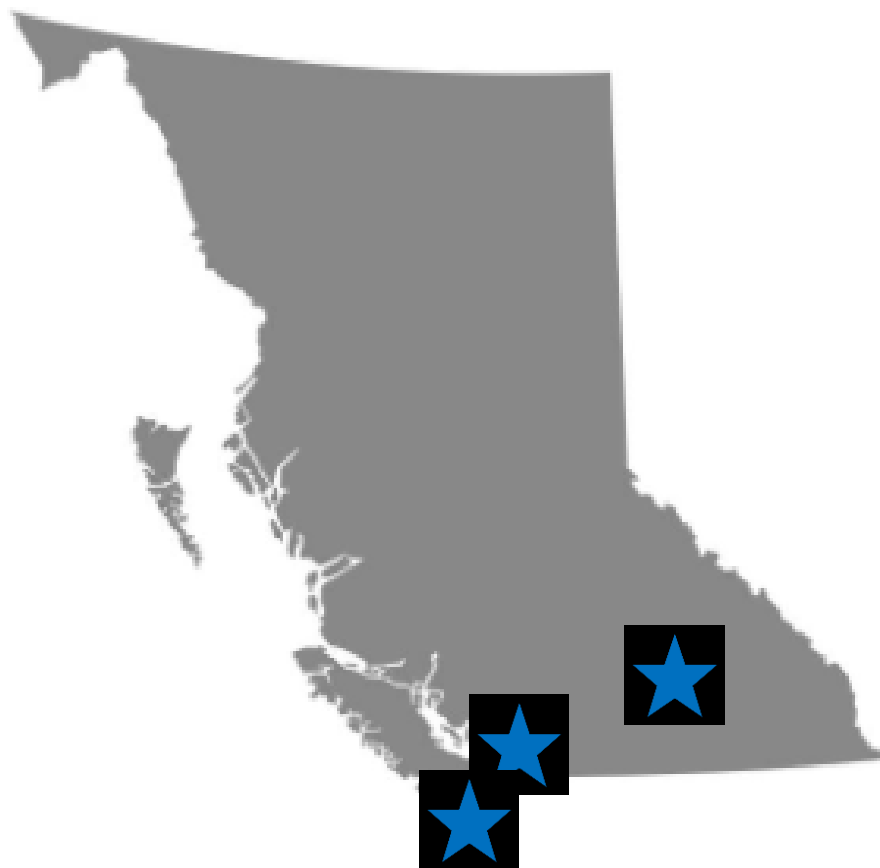
# Retrofitting multi-family buildings is costly and complicated

- ▶ Estimated cost at construction: \$930 to \$1,550 per EV-ready stall
- ▶ Cost of retrofit post-construction: three or more times the cost per stall and much more complex



Mid-rise building example (140 units)

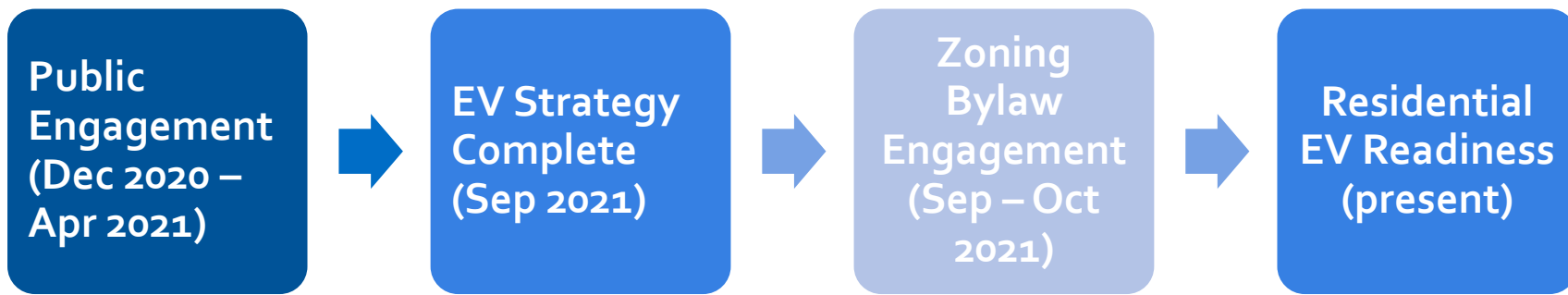
# Many Local Governments in BC Have Adopted EV Readiness



Example Municipality (date in effect)
Vancouver (2018)
Burnaby (2018)
Surrey (2019)
New Westminster (2019)
City of North Vancouver (2019)
District of North Vancouver (2021)
Coquitlam (2018)
Richmond (2017)
Port Moody (2019)
Squamish (2019)
Saanich (2020)
Nelson (2020)
Langley (2019)
West Vancouver (2018)
Victoria (2020)
Kamloops (expected 2022)

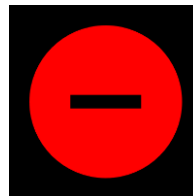


# Stakeholder Engagement



## Public Support:

- Predictable charging
- Future-proof new construction; avoids retrofit issues
- Increase EV purchase interest



## Development Industry Concerns:

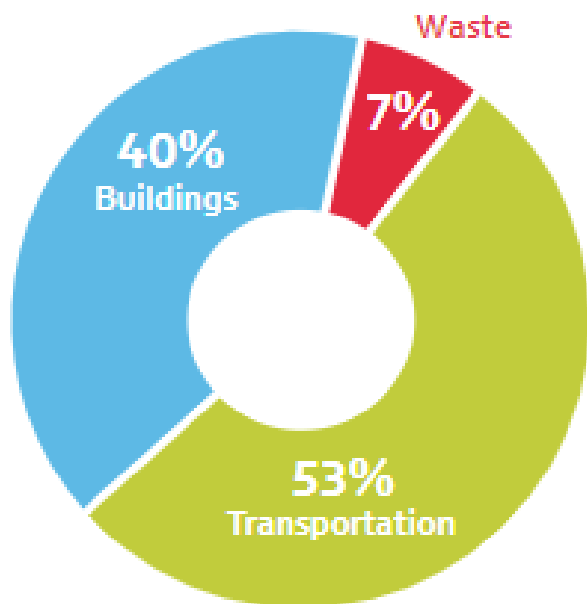
- Current charging demand
- Increased construction and housing costs
- Electric supply and availability

# Policy Evaluation

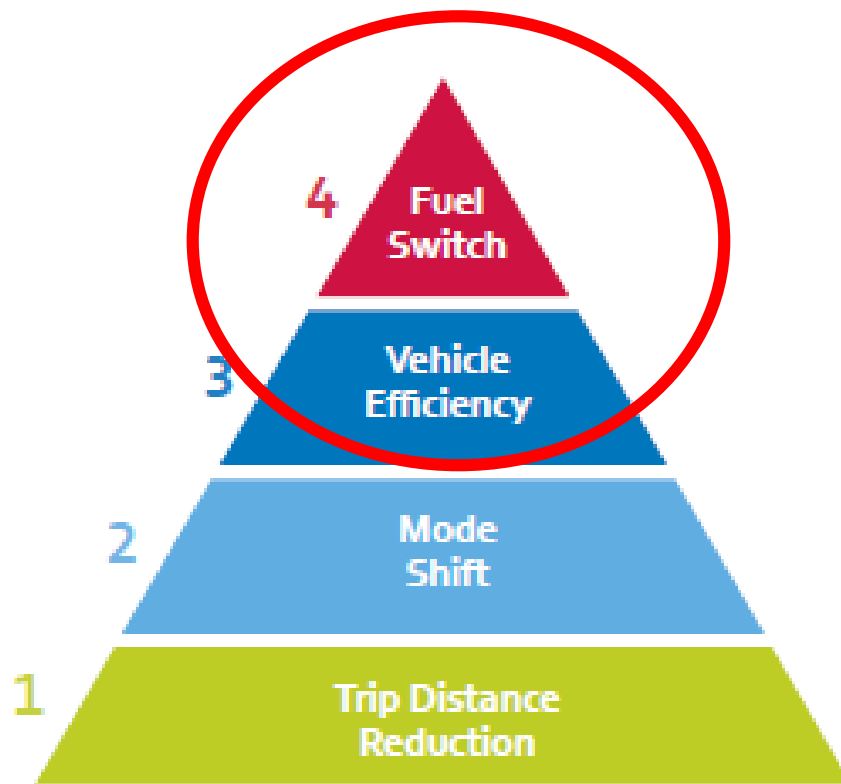
Policy Option	Minimize upfront costs	Minimize retrofit costs	Simple for strata	Equitable for residents	Provides future proofing
Percentage Approach (20%)	Green	Red	Red	Red	Red
Conduit-only Approach	Green	Red	Red	Red	Yellow
EV ready, 1 per dwelling unit	Yellow	Green	Green	Green	Green

\* Green best meets the criterion; orange moderately meets the criterion; red does not meet the criterion.

# EVs Unlock Significant GHG Reductions



*Kelowna GHG Emissions Profile (2017)*



# Recommendation

- ▶ For all new residential developments, require minimum of 1 energized electric vehicle outlet per dwelling unit
- ▶ Investigate additional EV readiness requirements



“Future-proofing” newly constructed buildings, which can last 50 or more years



Absence of home charging will be a persistent barrier to increasing EV ownership



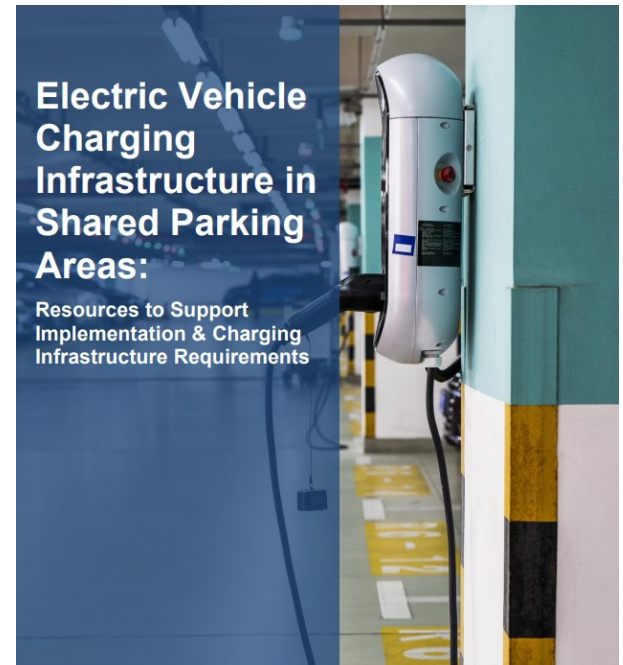
Core municipal tool to enable reaching GHG emissions reduction targets



Charging availability an asset that increases desirability of homes

# Next Steps

- ▶ Develop technical bulletin to accompany zoning bylaw update
- ▶ Develop EV charging infrastructure requirements for new institutional, commercial, industrial, and service station developments
- ▶ Continue implementation of EV Strategy actions



A publication of the City of Richmond with funding support from BC Hydro.



*Questions?*