



ZERO EMISSIONS VEHICLES UPDATE

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SUMMARY OF RECOMMENDATIONS

1

Require **100% EV-ready parking** in new multi-unit residential buildings

2

Informational Updates:

- Expanded public network
- **Preferential parking**

3

Allocate capital funding: **\$750,000** public network improvements per *EV Ecosystem Strategy*

4

Move EV requirements from Building Bylaw to **Parking Bylaw**

1

Vancouver's role

2

EV readiness in MURBs

3

Preferential Parking

4

Public Charging Network Expansion

5

Update: Federal/Provincial policy

Improving air quality and reducing noise

Reducing carbon pollution

Cutting transportation costs

Equity

Market support

Land-use and building policies

Coordination with other jurisdictions

Convenience

Lower cost for fueling

Lower impacts to utilities

CURRENT NEW BUILDING REQUIREMENTS FOR EV-READINESS

One-/Two-family homes Each garage/carport

MURBs 20% of parking stalls

Commercial buildings 10% of parking stalls

~20,000 home charging points since 2014

LIMITATIONS WITH CURRENT MURB REQUIREMENTS



No guarantee of access
Buildings will not meet future EV demand

Retrofit approvals difficult
Costs penalize later adopters



100% MURB stalls EV-ready

Two compliance options

- Prescriptive
- Performance

Significant **cost savings**

Some cases

up to \$300 increase *per stall*

Most cases

up to \$1,000 savings

All cases

up to \$3,300 savings vs. retrofit

Performance pathway uses
energy management approach

Access requirements

100% EV-ready **removes barriers**
to mass adoption

Low operating costs: \$0.20 vs. \$1.50/L

Cost parity by 2020s

100% EV-READY IS **ALREADY HAPPENING**

New MURB: **all 500 parking stalls** EV-ready

City of Richmond: 100% EV-Ready requirement in December 2017

Bylaws in force **January 1, 2019** if approved

Training for **staff & developers**;
Technical bulletin;
Case studies

100% EV-Ready in all new MURBs

Achievable with savings in most cases

Significant savings vs. retrofits

Reserved EV infrastructure

Preferred placement of stalls

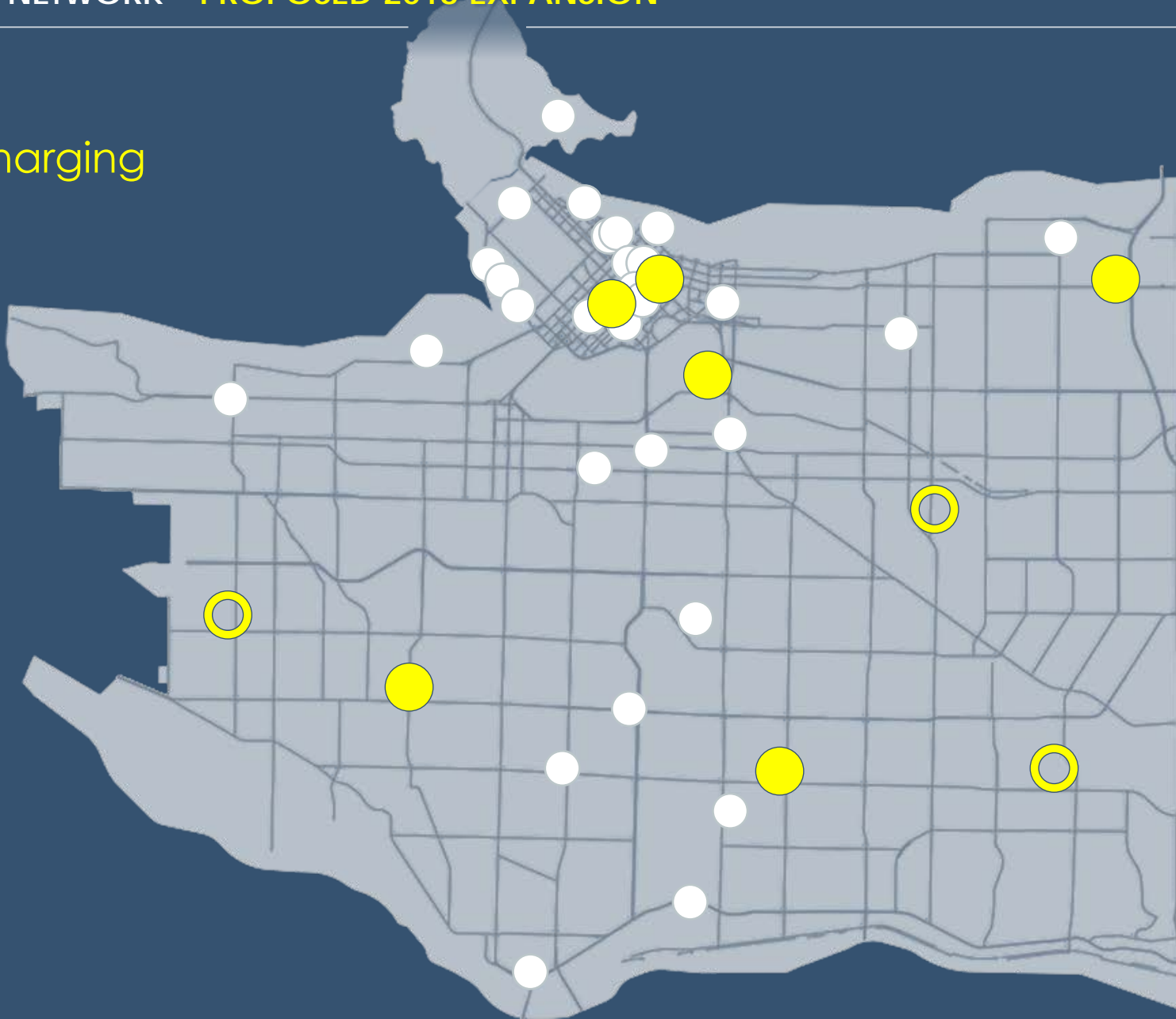
Access for large commercial ZEVs

PUBLIC CHARGING NETWORK - EXISTING



PUBLIC CHARGING NETWORK – PROPOSED 2018 EXPANSION

- Level 2
- DC Fast Charging



PROPOSED ALLOCATION: \$750,000

DC Fast Chargers

Science World
Empire Fields
South Hill BIA
Park: Richards/Smithe

Level 2 stations

above, plus
3 community centres

18 new stations

- 6 DCFC
- 12 Level 2

BC Zero-Emission Vehicle Mandate

Right-to-charge rules

BC Utilities Commission EV inquiry

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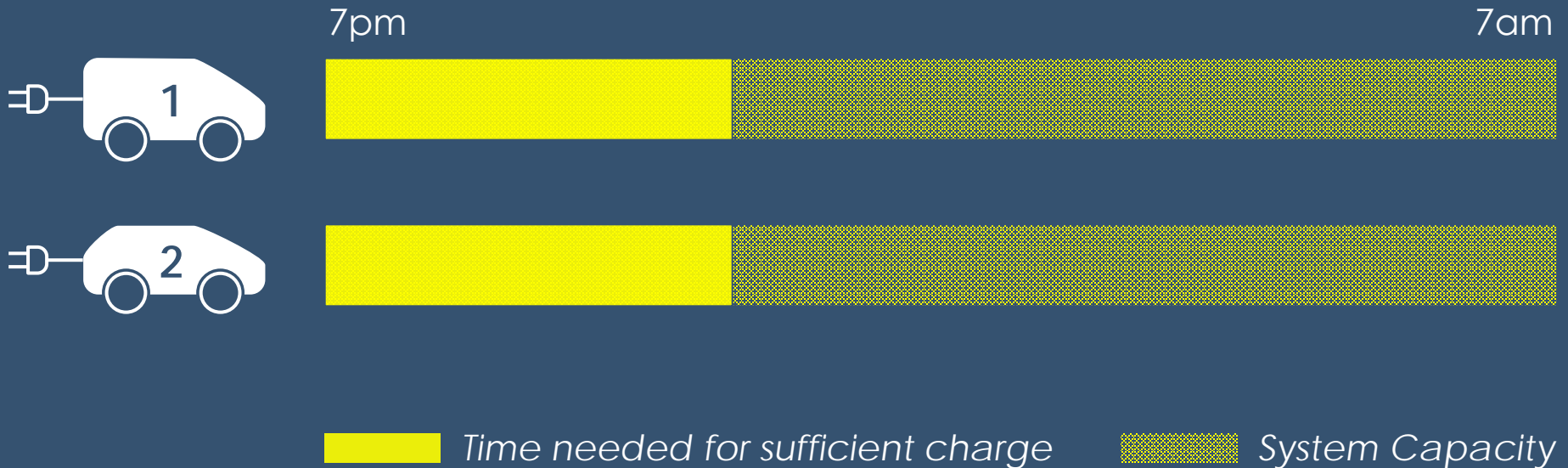
Questions



Without energy management:

Electrical system:

- Must be sized for **two EVs charging at maximum**
- **Sits idle** most of the night



With energy management:

Each EV could be charged more slowly within its parking time and still get sufficient charge, without the need to increase capacity.

