



Electric Vehicle Readiness

City of Tacoma | Tacoma Public Utilities
Infrastructure, Planning and Sustainability Committee
November 6, 2019
ITEM #1



OVERVIEW



- Code update recommendation
- Cost comparisons
- Next steps

BACKGROUND



Tacoma EV Policy Goals

- Resolution 40016 – May 2018
- Environmental Action Plan and Tacoma 2025
- Tacoma Power Strategic Plan (in development)

Related Goals

- Promote fossil-free transportation
- Promote convenient and affordable transportation options

3

LK5

BACKGROUND



Electric Vehicles in Tacoma

- 1,400 registered EVs in Tacoma through July 2019
- 1 in 5 drivers seriously considering EV purchase
- Most EV drivers do more than 80% of charging at home

Sources: Washington State Dept. of Licensing / AAA / US Dept. of Energy

EV Station Outlets in Tacoma (public access)

- Level 2 (240V, 4-6 hours) – 80+
- DC Fast (480V, 30 minutes) – 15

Source: Department of Energy/Alternative Fuels Data Center



4

Slide 4

LK5 I don't think we need this slide again

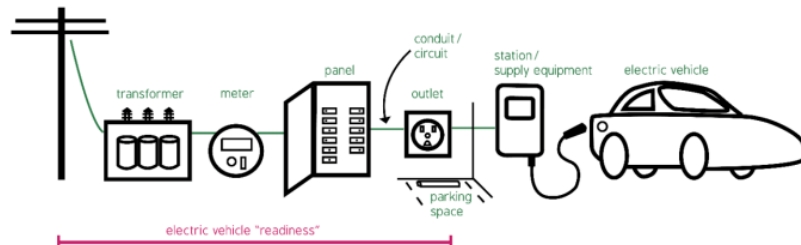
Lynett, Kristin, 10/15/2019

BACKGROUND



What

Diagram: EV Readiness



Why

- Access to convenient charging is critical to advance EV adoption into the mainstream
- Post-construction installation of electrical infrastructure more difficult and expensive (up to 5X cost of readiness)

5

ISSUES



- Move to Building Code
- Expand readiness requirements
- Meet next State Building Code (to be adopted July 2022)
- Partner with building community on education

6

RECOMMENDATION



- Increase readiness from 5% to 10% for all building types
- Increase readiness from 5% to 20% for multi-family buildings
- Existing EV charging station requirements transferred from land use code
- Draft code language hand-out provided

7

EV READINESS COSTS



- New Construction
 - Ideal timing – new construction, new parking, upgrading electrical panel
 - \$500-\$900/parking space
 - 1/5 cost of post-construction retrofit
- Building Retrofit
 - \$2,500-\$4,500/space
 - 5x cost of new construction

8

INCREMENTAL COSTS



Building Type	Incremental development cost	Cost per parking stall
Two-story multifamily		
20% readiness	0.06%	\$400
20% installation	0.42%	\$1,600
Five-story multifamily		
20% readiness	0.34%	\$550
20% installation	0.74%	\$2,400

(Underground, structured parking)

Source: City of Vancouver, BC study

9

HEALTH, EQUITY & SUSTAINABILITY ANALYSIS



- No tailpipe pollution.
- Cost of electric charging per month is half (or less) of gas costs.
- Little to no vehicle maintenance costs.
- Multi-family tenants need convenient access to charging.

10

OUTREACH



- Met with Master Builders Association
- Presented to Sustainable Tacoma Commission – September 26, 2019
- Hosted public information session – October 1, 2019
- Presented to Board of Building Appeals – Oct. 29, 2019

11

NEXT STEPS



- City Council consideration – December 2019
- Proposed effective date – January 2, 2020

12