

Seattle City Council

# Sustainability & Transportation Committee

April 2, 2019



## Electric Vehicle Readiness



**Seattle** Department of  
Construction & Inspections

**Seattle**  
Office of Sustainability  
& Environment

# Today

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- 1** Background
- 2** Developing the Proposal
- 3** Overview of Proposal



**Seattle**  
Office of Sustainability  
& Environment

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# Seattle Policy Goals

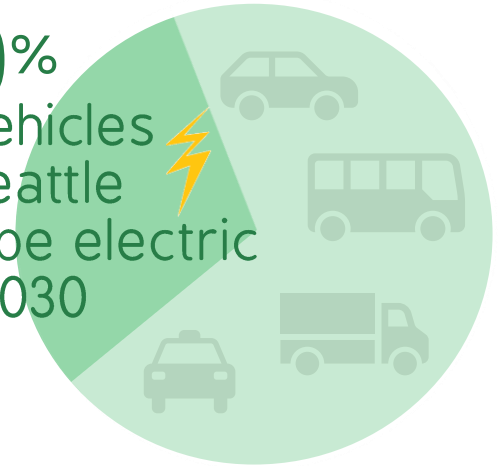
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## EV Policy Goals

- 2011** • Council Resolution 31312  
Net zero greenhouse gas emissions by 2050
- 2016** • Council Resolution 31696  
Support the electrification of transportation
- 2018** • Mayor Durkan's Climate Action Priority

Goal:

**30%**  
of vehicles  
in Seattle  
will be electric  
by 2030



## Related Goals

- Promote multi-modal mobility
- Reduce dependence on single-occupancy vehicles

# Electric Vehicle Adoption

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## EVs in Seattle

- 6,700 personal EVs registered as of December 2018
- Top 5 in EV market share among major US cities

## EV Production

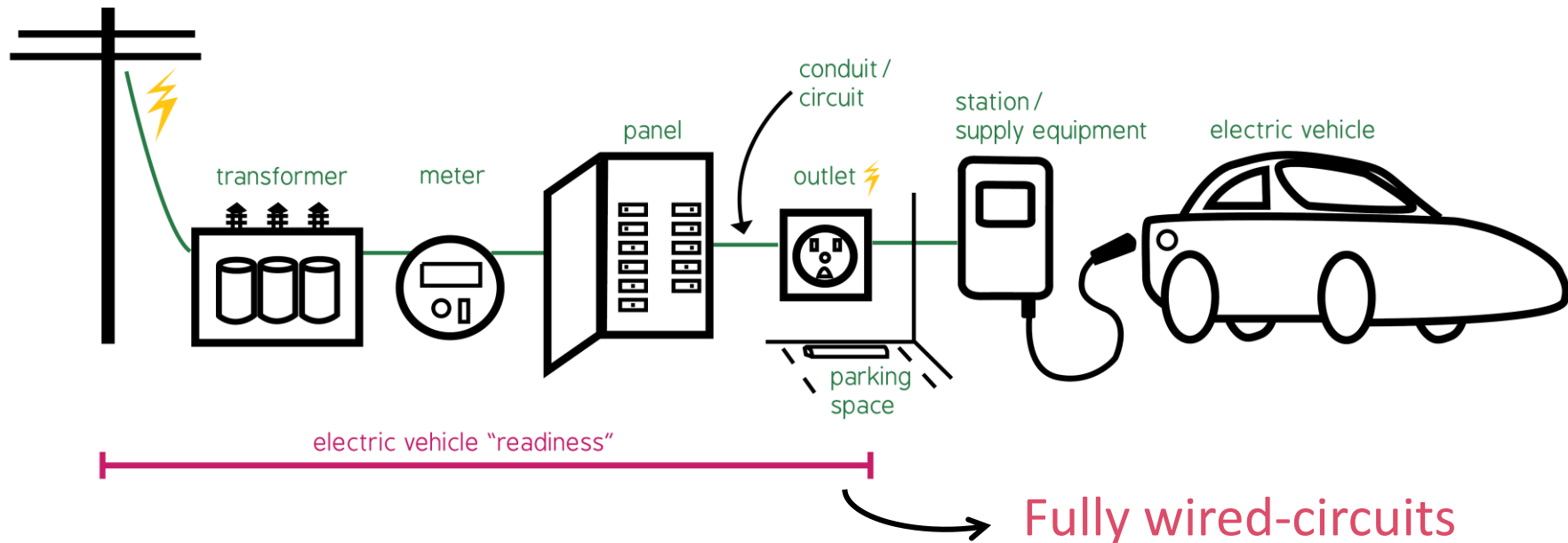
- Auto manufacturers are on board
- Within the next few years:
  - Ford to offer 40 EV models
  - GM to offer 20 all-electric EV models
  - Volvo and Mercedes to offer their entire portfolios EV



Image: Flickr, mariordo59

# EV Readiness

## What



## Why

- Access to convenient charging is a key factor in EV adoption
- It is often much more difficult to install electrical infrastructure after a building is constructed

# Other Cities

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## Requirements for fully-wired circuits

### San Francisco, CA

- 10% of parking stalls in multifamily and commercial buildings
- 100% of parking stalls for single-family homes and townhouses

### Vancouver, BC

- 100% of parking stalls in multifamily buildings
- 100% of single-family homes or townhouses with parking
- 10% of parking stalls in commercial buildings

### Atlanta, GA

- 20% of parking stalls in multifamily and commercial buildings
- 100% of single-family homes and townhouses with parking

# Current Requirements

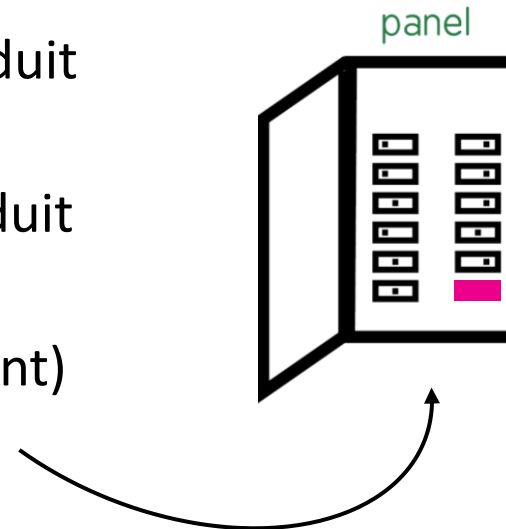
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## Seattle Electrical Code

- Added in 2008, strengthened in 2017

## Requirements

- Plans must show where future conduit and stations could be installed
- No physical obstructions to EV conduit
- Must reserve physical space on the electrical panel (or similar equipment) for EV circuit breakers





# Proposal Development

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## Goals

- Maximize readiness
- Minimize cost

## Parameters

- Apply to all parking provided, whether required or voluntary
- No change in parking requirements

## Scoping Questions

- Type of development
- Portion of parking spaces
- Type of charging infrastructure
- Level of charging
- Racial equity



Image: Flickr, Steve Rainwater



# Stakeholder Outreach

March to Sept 2018

## Environmental Orgs & EV Companies

Climate Solutions	National Car Charging	Volta
Environment WA	Electrify America	SemaConnect
Western WA Clean Cities	Cyan Strategies	Clipper Creek
Forth Mobility	ChargePoint	Reach Now
Greenlots	PowerFlex Systems	Tesla
	Evergreen Certified	Proterra

## Development & Property Mgt Community

Master Builders Assoc.	LMN	Seattle 2030 District
Gamut 360	Barrientos Ryan	Capitol Hill EcoDistrict
Dwell Development	Urban Visions	Seattle Housing Authority
Vulcan	Clise Properties	King County Housing Authority
Skanska	Unico Properties	

## Environmental Justice Community

Puget Sound Sage	OSE Environmental Justice Committee
Emerald Cities Collaborative	Environmental Coalition of South Seattle

## City of Seattle

City Light	SDOT	Office of Housing
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# What We've Heard

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Focus on residential development

Require Level 2 / 40-amp outlets

EV-charging is a marketable amenity but not very common in new development

Require fully-wired circuits

Load management technology can stretch power from one plug to serve up to 5 spaces

Retrofitting is often cost prohibitive

Renters face more barriers to EV adoption

Building owners/managers can figure out what charging stations and payment systems work for them

Home charging would help ride hail drivers adopt EVs

Avoid overbuilding, to keep construction costs low

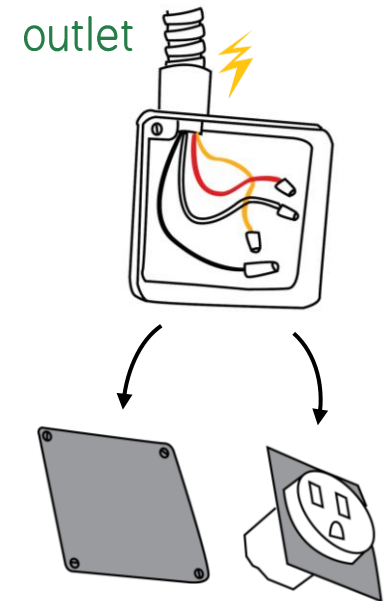
Avoid exacerbating displacement in communities of color

# Overview of Ordinance

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## Land Use Code amendments:

- **Define “EV-Ready”**  
Parking that includes a fully-wired circuit with a 208/240 volt, 40-amp outlet or termination point
- **Require EV-Readiness**  
A certain portion of parking spaces associated with new buildings must be EV-Ready, depending on:
  - Type of development / land use
  - Size and design of parking facilities
- **Allow Flexibility**  
For residential development that would need to make certain types of upgrades to the transformers

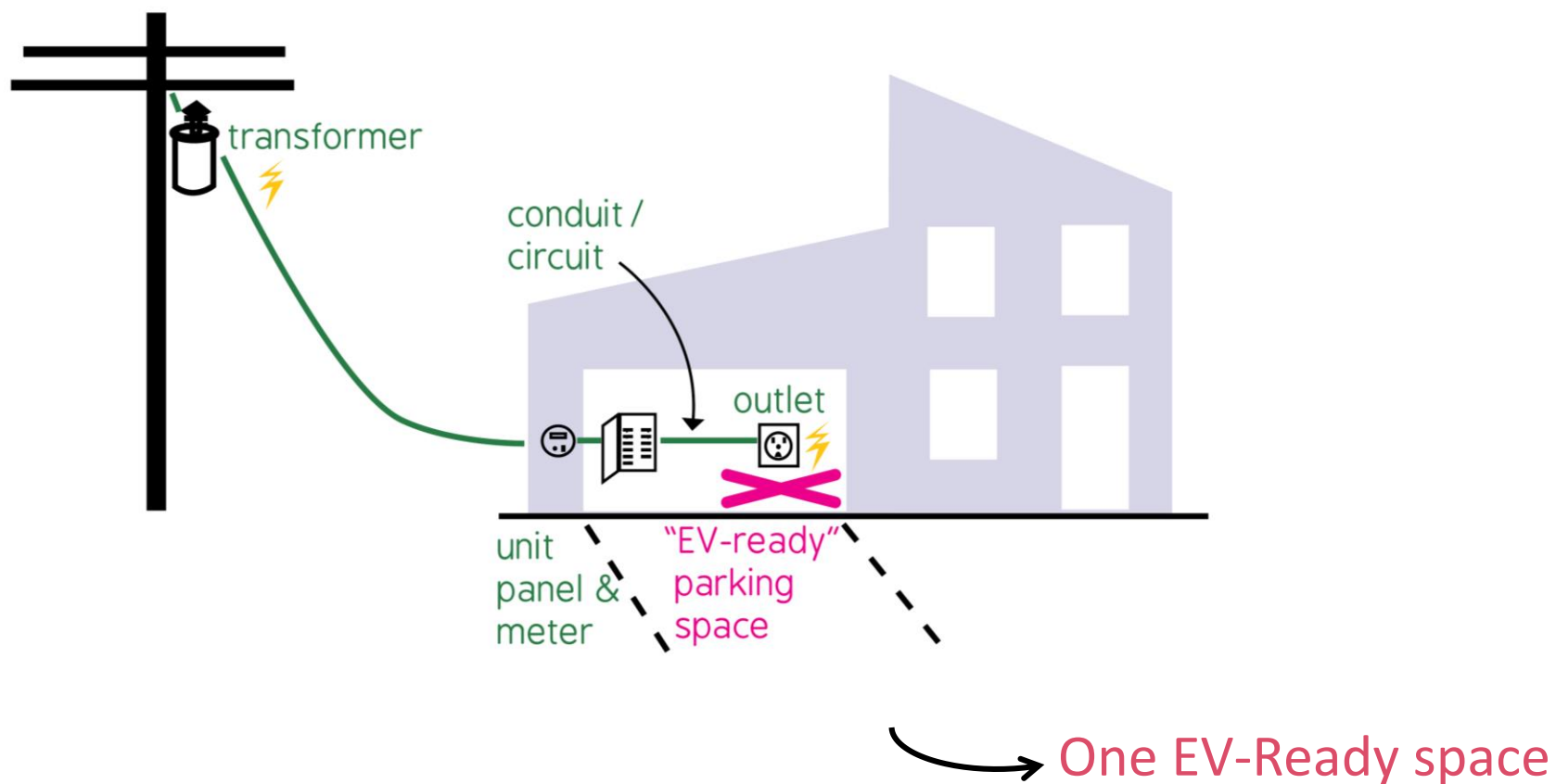


# Overview of Requirements

Land Use	Parking Facilities	EV Readiness Requirements
<b>Single-family and multifamily</b> (single-family, DADUs, townhouses, apartments, etc.)	Private/Individual garage, carport, or surface parking area	1 outlet per garage, carport, parking area
<b>Multifamily</b> (townhouses, apartments, etc.)	Shared surface parking (1-6 spaces) (7-25 spaces) (>25 spaces)	1 outlet per space 6 outlets total Outlets for 20% of spaces
	Shared parking garages	Outlets for 20% of spaces
<b>Other residential</b>	Any parking	Outlets for 20% of spaces
<b>Non-residential</b> (retail, office, industrial, institutional, etc.)	Any parking	Outlets for 10% of spaces

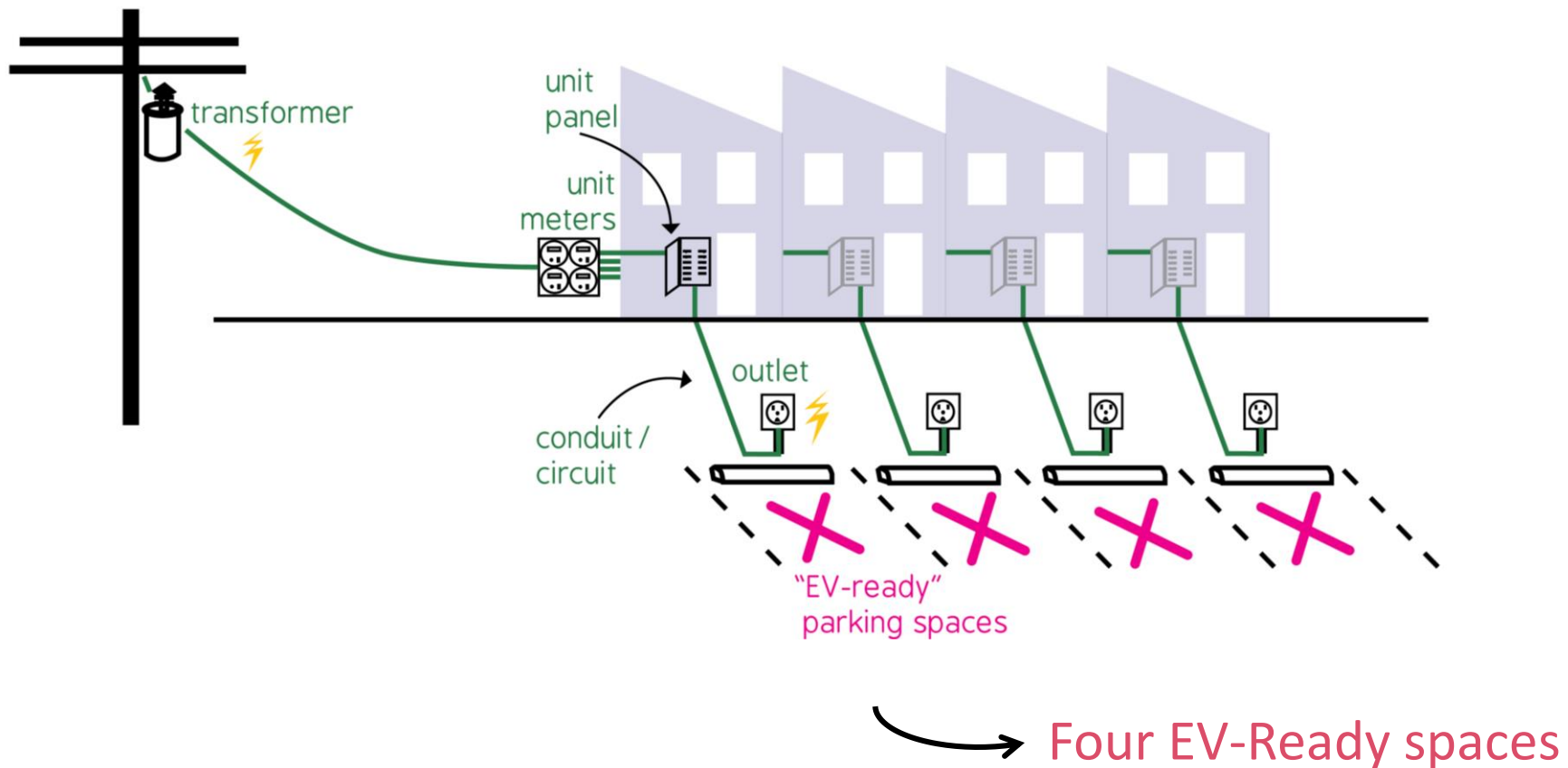
# Example Scenario 1

## Single house with a private garage



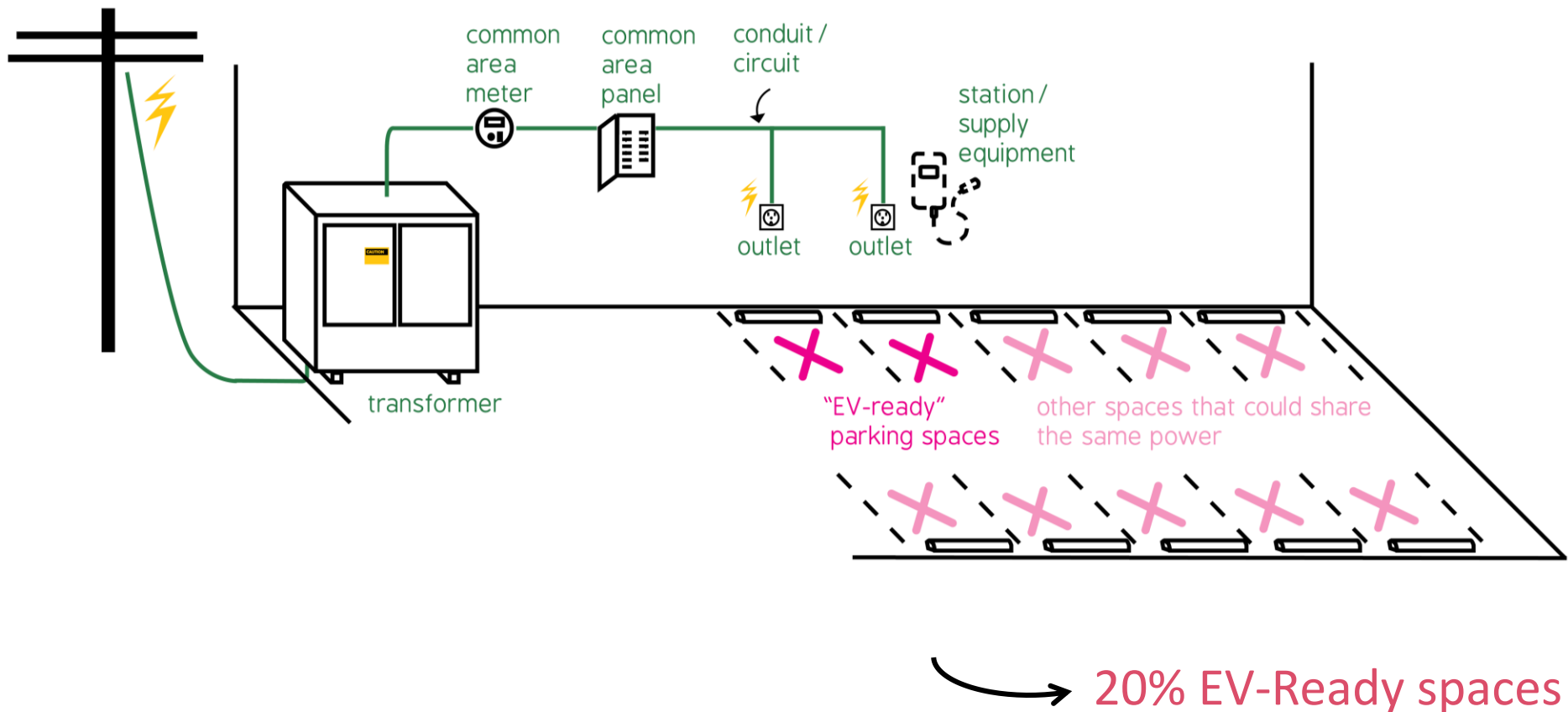
# Example Scenario 2

## Small multifamily project with surface parking



# Example Scenario 3

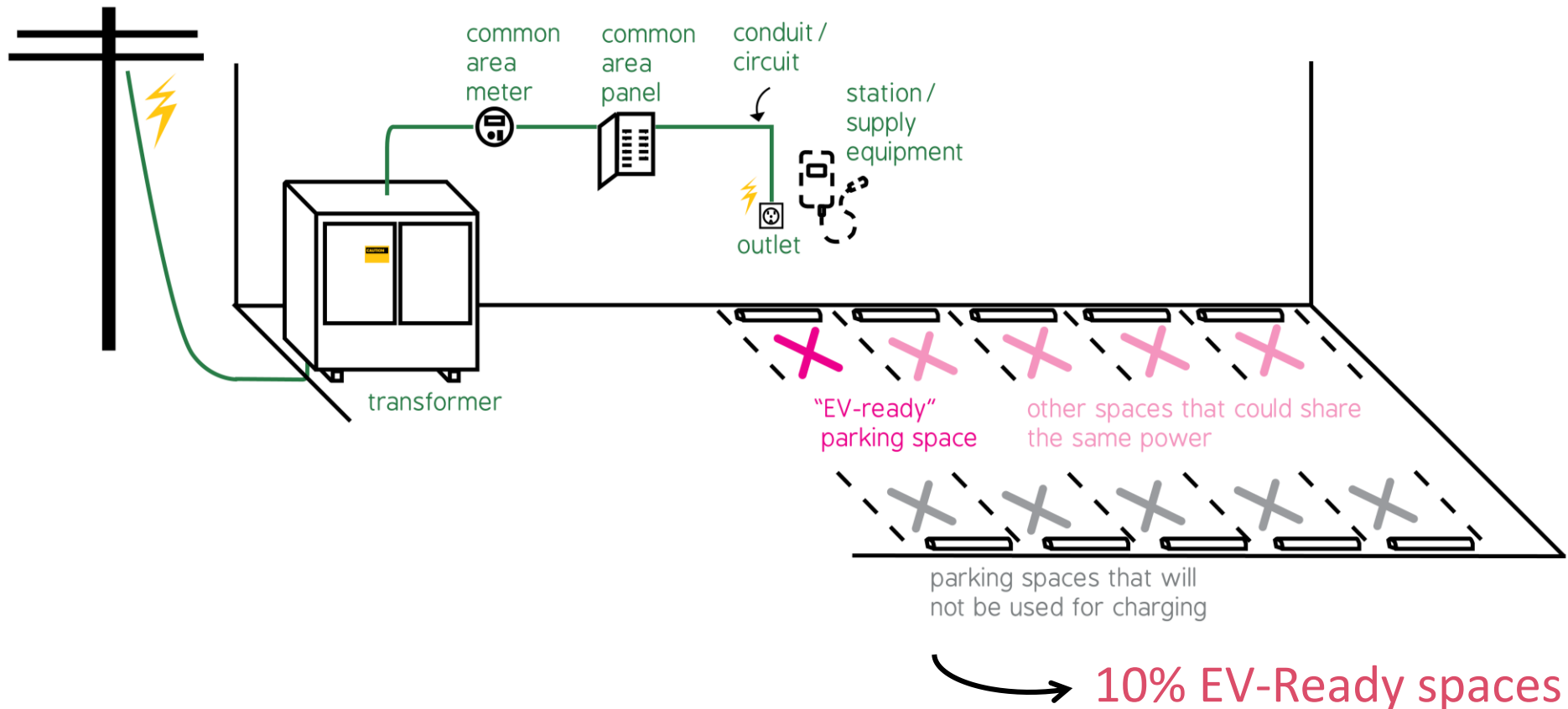
## Apartment building with parking garage





# Example Scenario 4

## Office building with parking garage



# Ordinance Cont'd

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## Other Requirements

- Legal agreements for unit lot subdivisions with common parking areas
- ADA spaces
- Design of surface parking far from building

## Ultimate Goal

- All new residential off-street parking is electrified
- Half of new non-residential off-street parking is electrified
- Thousands of new EV-Ready spaces each year



# Other City EV Efforts

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- Allowing EV Chargers in the Public Right-of-Way  
[SDOT Pilot](#)
- Installing Public Fast/DC Charging Stations  
[Seattle City Light](#)
- Installing EV Chargers in Existing Residential Buildings  
[Seattle City Light Pilot](#)
- Electrifying Freight & TNCs  
[OSE](#)



# Questions?

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## Staff Contact

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### OSE

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## Project Website

<http://www.seattle.gov/sdci/codes/changes-to-code/electric-vehicle-readiness>