



**SF Environment**

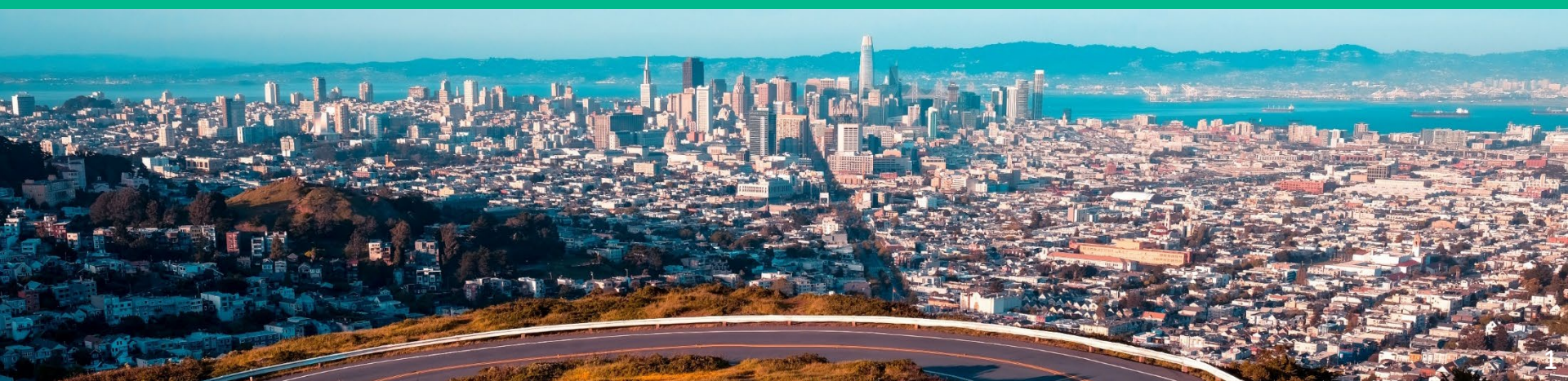
**Our home. Our city. Our planet.**

A Department of the City and County of San Francisco



# San Francisco EV Fleet Hearing

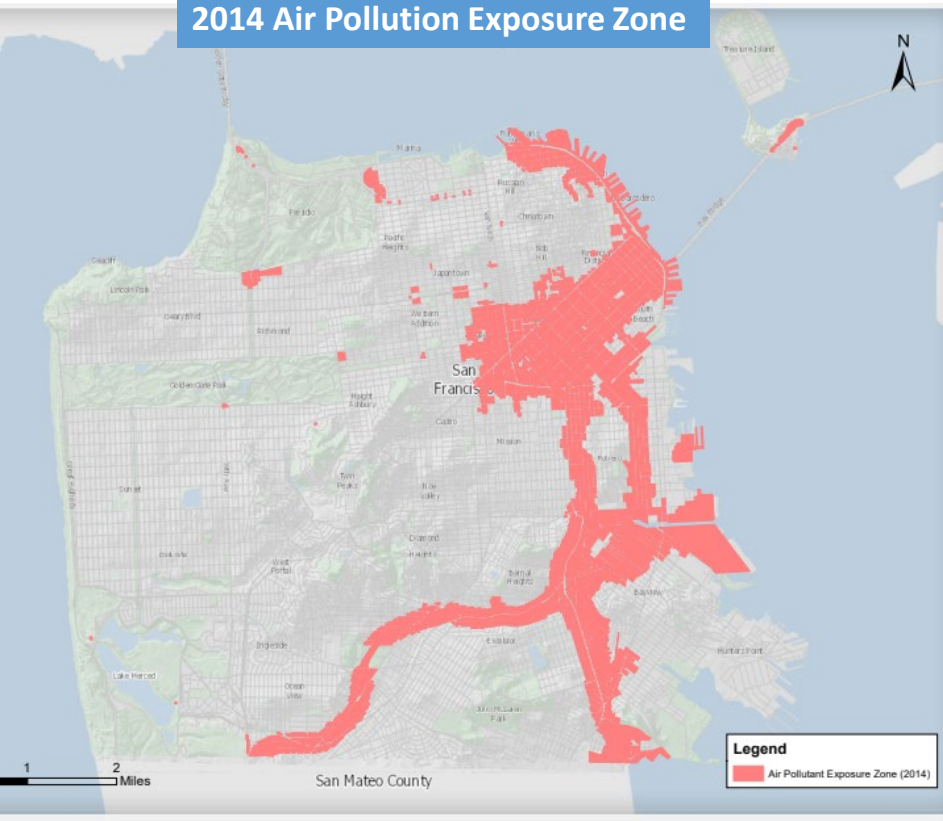
May 5, 2022



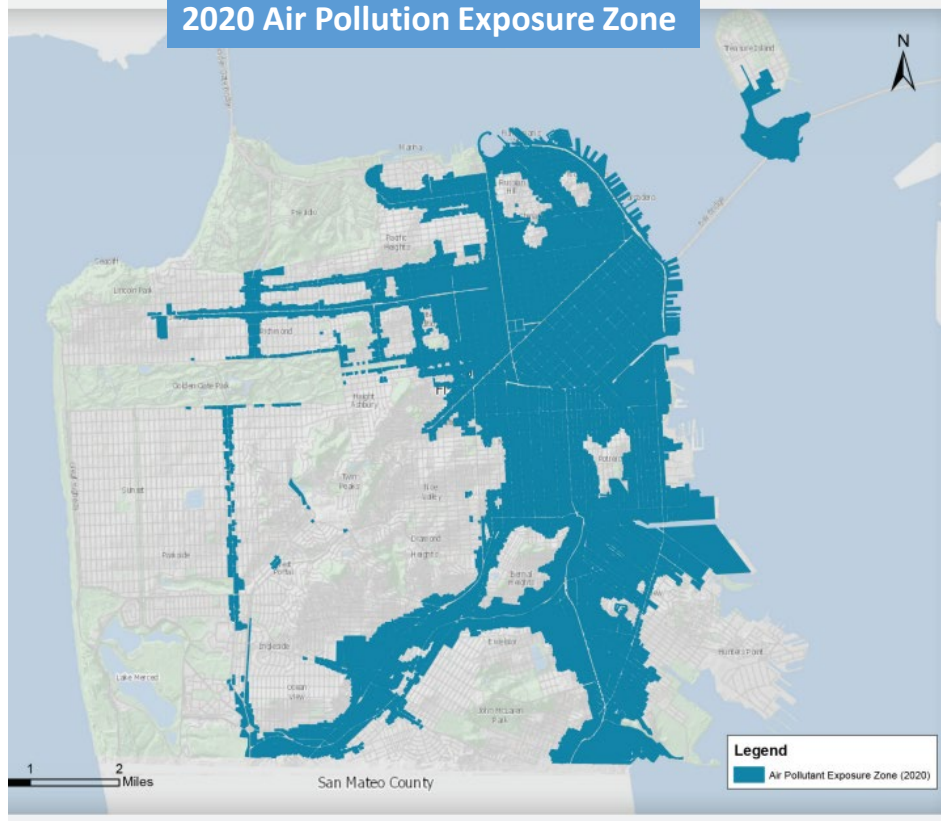


# Exposure to air pollution is worsening

2014 Air Pollution Exposure Zone



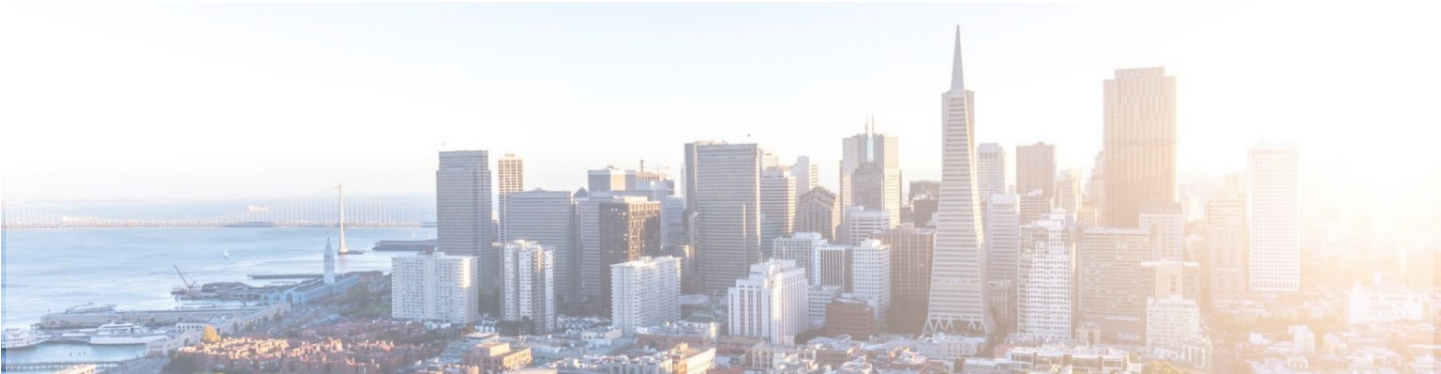
2020 Air Pollution Exposure Zone



# Municipal Fleet Electrification Government Audit and Oversight Committee

May 5, 2022

Catherine Spaulding  
Deputy Assistant General Manager, Power Enterprise  
San Francisco Public Utilities Commission



# Interconnection Challenges

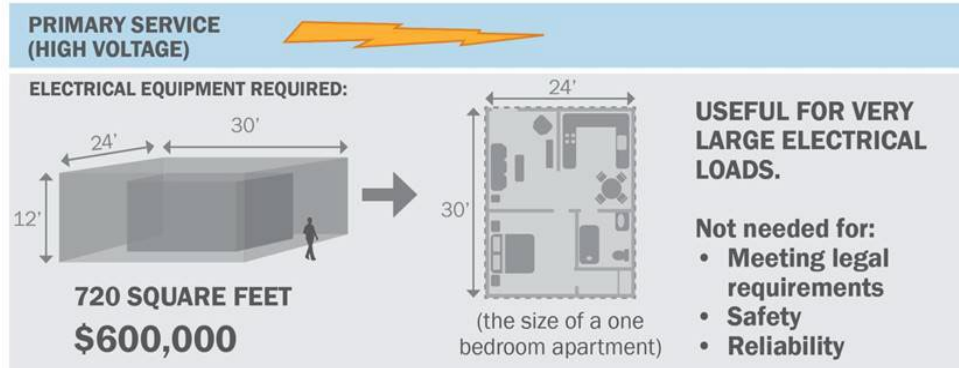
PG&E owns the distribution grid in San Francisco – thus significant costs and delays in transportation decarbonization, and ***some projects won't be able to proceed.***



*The City intends to purchase these distribution assets in order to meet the City's climate goals and provide timely services to San Franciscans*



*This graphic shows the size of infrastructure PG&E requires*



In the meantime, SFPUC engages upstream with municipal customers to make progress despite PG&E challenges

# Our Support to Municipal Departments

**In the critical transition to electrical fleets, SFPUC provides:**

- ✓ **Planning**
- ✓ **Project Support**
- ✓ **Rates**
- ✓ **Programs**





**San Francisco Office of the City Administrator**

# **Status of City's Electric Vehicle Fleet**

Douglas Legg, Deputy City Administrator

May 5, 2022

# ZEV Mandate Scope

The ZEV mandate applies to the **“Light Duty Passenger Vehicle”** fleet, defined in the legislation as including all sedans, coupes and station wagons primarily for the purposes of carrying passengers, and comprising of no more than 5 passenger seats.



**Focus on  
sedans**

The ZEV mandate also provides an exception for **“Emergency Vehicles,”** defined as any vehicle used by a public safety officer for law enforcement purposes, fighting fires or responding to emergency fire calls, or used by emergency medical technicians or paramedics.



**Focus on  
non public  
safety depts**

## City’s Light Duty Fleet

Vehicle Types	Non Emergency Vehicles	Emergency Vehicles	Grand Total
Sedans	815	454	1,269
Sedans-Patrol	-	160	160
Pickups	533	42	575
SUVs	212	158	370
SUVs-Patrol	-	383	283
Vans	279	23	302
<b>Grand Total</b>	<b>1,839</b>	<b>1,120</b>	<b>2,959</b>

# Non-Emergency Sedan Fleet Composition

- Currently, our non-emergency sedan fleet is 13% ZEV, and 24% EV (including PHEVs).
- We are increasing the proportion of ZEV purchases each year. However, the current conversion rate is only  $\approx 5\%$ , so it will be years before we have an all ZEV fleet.

	Fuel Type	FY18	FY19	FY20	FY21	FY22,23*
<b>Purchases</b> (both new & replacements)	Gas, Hybrid, CNG	9	2	-	-	-
	PHEV	6	22	12	7	5
	ZEV	17	22	16	17	34
	<b>EV Subtotal</b>	<b>23</b>	<b>44</b>	<b>28</b>	<b>24</b>	<b>39</b>
<b>Fleet Composition</b> (Non-emergency sedan fleet only)	Gas, Hybrid, CNG	90%	87%	82%	78%	70%
	PHEV	6%	7%	9%	11%	12%
	ZEV	4%	7%	9%	11%	17%
	<b>EV Subtotal</b>	<b>10%</b>	<b>13%</b>	<b>18%</b>	<b>22%</b>	<b>30%</b>

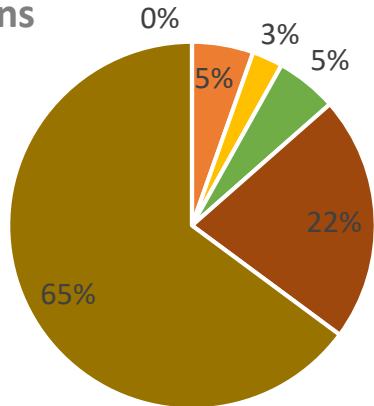
\* Includes all approved equipment budgets, and most have not yet gone through procurement.



# ZEV Mandate Waivers

- Since FY18, a total of 8 waivers have been approved (for 33 vehicles), and 5 waivers have been denied (for 11 vehicles).
- Lack of charging infrastructure is a common theme.
- Waivers will not be granted as hydrogen fuel stations become more reliable, and charging infrastructure becomes available.

**Justifications  
Cited on  
Waivers**



- No vehicle available to meet needs
- To be used primarily outside the City where there is a lack of charging infrastructure
- To be driven 100+ miles regularly
- To be parked on City property that lacks charging infrastructure
- To be parked on non-City property that lacks charging infrastructure
- Inadequate funding appropriation  
*(this reason not cited on any of the waivers)*

# LOI Question: Projection for the next 4 years?

---

The responding departments together project adding 130 or so EVs in the next 4 years, which would boost the EV percentage from 24% now to 40% by FY25.

**ADM**

All sedans in the shared pools and ADM departments to be ZEV.

---

**DBI**

Acquisition of 2–6 passenger vehicles, converting up to half of sedan fleet to EVs.

---

**POL**

Replace 150 marked and unmarked units with hybrid units in the next 2 years.

---

**PRT**

Acquisition of 2–6 passenger vehicles, converting up to half of sedan fleet to EVs.

---

**PUC**

Passenger vehicle fleet to be 50% all electric.

---

**SFO**

All passenger vehicles to be ZEV by 2023.

---

# LOI Questions Regarding EV Charging Infra

*Enough Chargers for current/future EVs?*

*How are you doing with regards to charging stations?  
What are your plans if any?*

ADM

**Yes / No**

Make EV charging stations at 49SVN available for depts that need them in 2022. Work with ADM divisions to plan for infrastructure projects, promote shared pools.

DBI

**No / No**

Only have enough chargers for 10 electric vehicles between 2 sites, and do not have the ability to charge the rest of the 34 PHEVs.

POL

**Yes / No**

Charging stations will be planned for new facilities and existing facility remodels. Infrastructure plan to retrofit existing facilities will be developed.

PRT

**Yes / No**

Conducted RFI with 3 companies to develop publicly accessible charging stations. Working with PUC to expand electric grid to support future demand.

PUC

**Yes / No**

Engaging with departments to support them in their electrification projects. (e.g. MTA bus electrification pilot, MTA Ocean Ave lot, Fort Mason Center parking lot)

SFO

**Yes / No**

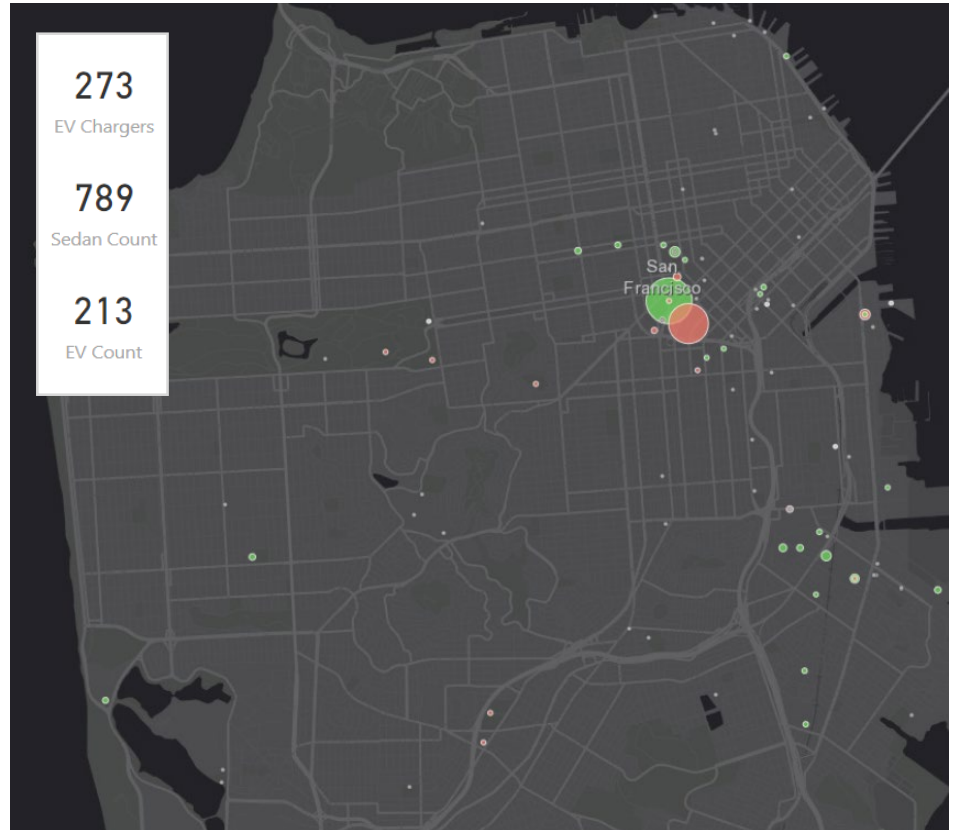
Target of installing EV charging in at least 10% of parking stalls by 2023-25. Landside and airside projects will advance with funding availability.

# Supply & Demand Gap of EV Chargers

The bubbles represent the difference between the number of EV chargers and EV sedans at each site.

- = Fewer EVs than Chargers
- = More EVs than Chargers

The obvious gap is downtown – 49SVN has an abundance of EV chargers available, while there are no chargers at the 12<sup>th</sup> Street Garage for the 64 EVs parked there.



# Opportunities to Further ZEV Adoption

---

- Obtain funding for departments' EV infrastructure projects via capital planning, grant programs, etc.
- Re-strategize on usage of 49SVN garage.
- Expand inter-departmental pooling at Civic Center Garage or other locations where vehicles and facilities concentrate, allowing incremental fleet reduction.
- Reduce size of fleet if consistent lower vehicle usage is observed post-pandemic.
- Pursue partnerships to add a hydrogen fueling station in the City.
- Pilot emerging ZEV pickup trucks and vans.